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4
PATENT APPLICATION
Attorney Docket No. 21402-235 (CURA-535)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Kekuda, *et al*
SERIAL NUMBER: 10/037,417 EXAMINER: Not yet assigned
FILING DATE: January 4, 2002 ART UNIT: 1641
FOR: PROTEINS AND NUCLEIC ACIDS ENCODING SAME

Box Sequence

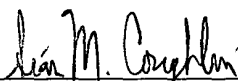
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**STATEMENT IN SUPPORT OF COMPUTER READABLE
FORM SUBMISSION UNDER 37 C.F.R. § 1.821(f)**

I hereby state that the content of the paper and computer readable forms of the Sequence Listing, submitted in the above-identified application in accordance with 37 C.F.R. § 1.821(c) and 1.821(e), respectively, are the same. No new matter is added at this time.

Respectfully submitted,

Dated: September 20, 2002


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#4 SEQUENCE LISTING



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Burgess, Catherine E
Vernet, Corine A.M.
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Ellerman, Karen
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Padigaru, Muralidhara
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Tyr Cys Asp Ile Cys Thr Ala Ala Asn Ser Asn Lys Ala His Pro Ala
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Ser Asn Ala Ile Asp Gly Thr Glu Arg Trp Trp Gln Ser Pro Pro Leu
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Ser Arg Gly Leu Glu Tyr Asn Glu Val Asn Val Thr Leu Asp Leu Gly
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 35 40 45
 Cys Arg Glu Cys Ala Pro Gly Tyr Trp Gly Leu Pro Glu Gln Gly Cys
 50 55 60
 Arg Arg Cys Gln Cys Pro Gly Gly Arg Cys Asp Pro His Thr Gly Arg
 65 70 75 80

Cys	Asn	Cys	Pro	Pro	Gly	Leu	Ser	Gly	Glu	Arg	Cys	Asp	Thr	Cys	Ser	85	90	95
Gln	Gln	His	Gln	Val	Pro	Val	Pro	Gly	Gly	Pro	Val	Gly	His	Ser	Ile	100	105	110
His	Cys	Glu	Val	Cys	Asp	His	Cys	Val	Val	Leu	Leu	Leu	Asp	Asp	Leu	115	120	125
Glu	Arg	Ala	Gly	Ala	Leu	Leu	Pro	Ala	Ile	His	Glu	Gln	Leu	Arg	Gly	130	135	140
Ile	Asn	Ala	Ser	Ser	Met	Ala	Trp	Ala	Arg	Leu	His	Arg	Leu	Asn	Ala	145	150	155
Ser	Ile	Ala	Asp	Leu	Gln	Ser	Gln	Leu	Arg	Ser	Pro	Leu	Gly	Pro	Arg	165	170	175
His	Glu	Thr	Ala	Gln	Gln	Leu	Glu	Val	Leu	Glu	Gln	Gln	Ser	Thr	Ser	180	185	190
Leu	Gly	Gln	Asp	Ala	Arg	Arg	Leu	Gly	Gly	Gln	Ala	Val	Gly	Thr	Arg	195	200	205
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<210> 10
<211> 400
<212> PRT
<213> Homo sapiens

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Met Asp Ser Leu Gly Ala Val Ser Thr Arg Leu Gly Phe Asp Leu Phe
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Lys Glu Leu Lys Lys Thr Asn Asp Gly Asn Ile Phe Phe Ser Pro Val
      20             25             30

Gly Ile Leu Thr Ala Ile Gly Met Val Leu Leu Gly Thr Arg Gly Ala
      35             40             45

Thr Ala Ser Gln Leu Glu Glu Val Phe His Ser Glu Lys Glu Thr Lys
      50             55             60

Ser Ser Arg Ile Lys Ala Glu Glu Lys Glu Val Val Arg Ile Lys Ala
      65             70             75             80

Glu Gly Lys Glu Ile Glu Asn Thr Glu Ala Val His Gln Gln Phe Gln
      85             90             95

Lys Phe Leu Thr Glu Ile Ser Lys Leu Thr Asn Asp Tyr Glu Leu Asn
      100            105            110

Ile Thr Asn Arg Leu Phe Gly Glu Lys Thr Tyr Leu Phe Leu Gln Lys
      115            120            125

Tyr Leu Asp Tyr Val Glu Lys Tyr Tyr His Ala Ser Leu Glu Pro Val
      130            135            140

Asp Phe Val Asn Ala Ala Asp Glu Ser Arg Lys Lys Ile Asn Ser Trp
      145            150            155            160

Val Glu Ser Lys Thr Asn Glu Lys Ile Lys Asp Leu Phe Pro Asp Gly
      165            170            175

Ser Ile Ser Ser Ser Thr Lys Leu Val Leu Val Asn Met Val Tyr Phe
      180            185            190

Lys Gly Gln Trp Asp Arg Glu Phe Lys Lys Glu Asn Thr Lys Glu Glu
      195            200            205

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Lys Phe Trp Met Asn Lys Ser Thr Ser Lys Ser Val Gln Met Met Thr
 210 215 220
 Gln Ser His Ser Phe Ser Phe Thr Phe Leu Glu Asp Leu Gln Ala Lys
 225 230 235 240
 Ile Leu Gly Ile Pro Tyr Lys Asn Asn Asp Leu Ser Met Phe Val Leu
 245 250 255
 Leu Pro Asn Asp Ile Asp Gly Leu Glu Lys Ile Ile Asp Lys Ile Ser
 260 265 270
 Pro Glu Lys Leu Val Glu Trp Thr Ser Pro Gly His Met Glu Glu Arg
 275 280 285
 Lys Val Asn Leu His Leu Pro Arg Phe Glu Val Glu Asp Gly Tyr Asp
 290 295 300
 Leu Glu Ala Val Leu Ala Ala Met Gly Met Gly Asp Ala Phe Ser Glu
 305 310 315 320
 His Lys Ala Asp Tyr Ser Gly Met Ser Ser Gly Ser Gly Leu Tyr Ala
 325 330 335
 Gln Lys Phe Leu His Ser Ser Phe Val Ala Val Thr Glu Glu Gly Thr
 340 345 350
 Glu Ala Ala Ala Ala Thr Gly Ile Gly Phe Thr Val Thr Ser Ala Pro
 355 360 365
 Gly His Glu Asn Val His Cys Asn His Pro Phe Leu Phe Phe Ile Arg
 370 375 380
 His Asn Glu Ser Asn Ser Ile Leu Phe Phe Gly Arg Phe Ser Ser Pro
 385 390 395 400

<210> 11
 <211> 1238
 <212> DNA
 <213> Homo sapiens

<400> 11
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<210> 12
<211> 400
<212> PRT
<213> Homo sapiens

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Lys Glu Leu Lys Lys Thr Asn Asp Gly Asn Ile Phe Phe Ser Pro Val
      20              25              30

Gly Ile Leu Thr Ala Ile Gly Met Val Leu Leu Gly Thr Arg Gly Ala
      35              40              45

Thr Ala Ser Gln Leu Glu Glu Val Phe His Ser Glu Lys Glu Thr Lys
      50              55              60

Ser Ser Arg Ile Lys Ala Glu Glu Lys Glu Val Val Arg Ile Lys Ala
      65              70              75              80

Glu Gly Lys Glu Ile Glu Asn Thr Glu Ala Val His Gln Gln Phe Gln
      85              90              95

Lys Phe Leu Thr Glu Ile Ser Lys Leu Thr Asn Asp Tyr Glu Leu Asn
      100             105             110

Ile Thr Asn Arg Leu Phe Gly Glu Lys Thr Tyr Leu Phe Leu Gln Lys
      115             120             125

Tyr Leu Asp Tyr Val Glu Lys Tyr Tyr His Ala Ser Leu Glu Pro Val
      130             135             140

Asp Phe Val Asn Ala Ala Asp Glu Ser Arg Lys Lys Ile Asn Ser Trp
      145             150             155             160

Val Glu Ser Lys Thr Asn Glu Lys Ile Lys Asp Leu Phe Pro Asp Gly
      165             170             175

Ser Ile Ser Ser Ser Thr Lys Leu Val Leu Val Asn Met Val Tyr Phe
      180             185             190

Lys Gly Gln Trp Asp Arg Gly Phe Lys Lys Glu Asn Thr Lys Glu Glu
      195             200             205

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Lys	Phe	Trp	Met	Asn	Lys	Ser	Thr	Ser	Lys	Ser	Val	Gln	Met	Met	Thr
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Gln	Ser	His	Ser	Phe	Ser	Phe	Thr	Phe	Leu	Glu	Asp	Leu	Gln	Ala	Lys
225					230					235					240
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				245					250					255	
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			260					265					270		
Pro	Glu	Lys	Leu	Val	Glu	Trp	Thr	Ser	Pro	Gly	His	Met	Glu	Glu	Arg
		275					280					285			
Lys	Val	Asn	Leu	His	Leu	Pro	Arg	Phe	Glu	Val	Glu	Asp	Ser	Tyr	Asp
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Leu	Glu	Ala	Val	Leu	Ala	Ala	Met	Gly	Met	Gly	Asp	Ala	Phe	Ser	Glu
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His	Lys	Ala	Asp	Tyr	Ser	Gly	Met	Ser	Ser	Gly	Ser	Gly	Leu	Tyr	Ala
				325					330					335	
Gln	Lys	Phe	Leu	His	Ser	Ser	Phe	Val	Ala	Val	Thr	Glu	Glu	Gly	Thr
			340					345						350	
Glu	Ala	Ala	Ala	Ala	Thr	Gly	Ile	Gly	Phe	Thr	Val	Thr	Ser	Ala	Pro
		355					360					365			
Gly	His	Glu	Asn	Val	His	Cys	Asn	His	Pro	Phe	Leu	Phe	Phe	Ile	Arg
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His	Asn	Glu	Ser	Asn	Ser	Ile	Leu	Phe	Phe	Gly	Arg	Phe	Ser	Ser	Pro
385					390					395					400

<210> 13
 <211> 1559
 <212> DNA
 <213> Homo sapiens

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 ccggatgacg gaagactcca gtagattgat ggatgtctcc cagcaagaga aggccaagag 180
 aggacgtgag aagcaggcag cagcgacctt tcaccaaaaag ggtggaaatc cctgtattcc 240
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 gaagagctca agaataaagg ctgaagaaaa agagggtggtg agaataaagg ctgaaggaaa 600

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cctcttcctt caaaaatact tagattatgt tgaaaaatat tatcatgcat ctctggaacc 780
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<210> 14
<211> 400
<212> PRT
<213> Homo sapiens

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  1             5             10             15

Lys Glu Leu Lys Lys Thr Asn Asp Gly Asn Ile Phe Phe Ser Pro Val
      20             25             30

Gly Ile Leu Thr Ala Ile Gly Met Val Leu Leu Gly Thr Arg Gly Ala
      35             40             45

Thr Ala Ser Gln Leu Glu Glu Val Phe His Ser Glu Lys Glu Thr Lys
      50             55             60

Ser Ser Arg Ile Lys Ala Glu Glu Lys Glu Val Val Arg Ile Lys Ala
      65             70             75             80

Glu Gly Lys Glu Ile Glu Asn Thr Glu Ala Val His Gln Gln Phe Gln
      85             90             95

Lys Phe Leu Thr Glu Ile Ser Lys Leu Thr Asn Asp Tyr Glu Leu Asn
      100            105            110

Ile Thr Asn Arg Leu Phe Gly Glu Lys Thr Tyr Leu Phe Leu Gln Lys
      115            120            125

Tyr Leu Asp Tyr Val Glu Lys Tyr Tyr His Ala Ser Leu Glu Pro Val
      130            135            140

Asp Phe Val Asn Ala Ala Asp Glu Ser Arg Lys Lys Ile Asn Ser Trp
      145            150            155            160

Val Glu Ser Lys Thr Asn Glu Lys Ile Lys Asp Leu Phe Pro Asp Gly
      165            170            175

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Ser Ile Ser Ser Ser Thr Lys Leu Val Leu Val Asn Met Val Tyr Phe
 180 185 190
 Lys Gly Gln Trp Asp Arg Glu Phe Lys Lys Glu Asn Thr Lys Glu Glu
 195 200 205
 Lys Phe Trp Met Asn Lys Ser Thr Ser Lys Ser Val Gln Met Met Thr
 210 215 220
 Gln Ser His Ser Phe Ser Phe Thr Phe Leu Glu Asp Leu Gln Ala Lys
 225 230 235 240
 Ile Leu Gly Ile Pro Tyr Lys Asn Asn Asp Leu Ser Met Phe Val Leu
 245 250 255
 Leu Pro Asn Asp Ile Asp Gly Leu Glu Lys Ile Ile Asp Lys Ile Ser
 260 265 270
 Pro Glu Lys Leu Val Glu Trp Thr Ser Pro Gly His Met Glu Glu Arg
 275 280 285
 Lys Val Asn Leu His Leu Pro Arg Phe Glu Val Glu Asp Ser Tyr Asp
 290 295 300
 Leu Glu Ala Val Leu Ala Ala Met Gly Met Gly Asp Ala Phe Ser Glu
 305 310 315 320
 His Lys Ala Asp Tyr Ser Gly Met Ser Ser Gly Ser Gly Leu Tyr Ala
 325 330 335
 Gln Lys Phe Leu His Ser Ser Phe Val Ala Val Thr Glu Glu Gly Thr
 340 345 350
 Glu Ala Ala Ala Ala Thr Gly Ile Gly Phe Thr Val Thr Ser Ala Pro
 355 360 365
 Gly His Glu Asn Val His Cys Asn His Pro Phe Leu Phe Phe Ile Arg
 370 375 380
 His Asn Glu Ser Asn Ser Ile Leu Phe Phe Gly Arg Phe Ser Ser Pro
 385 390 395 400

<210> 15
 <211> 818
 <212> DNA
 <213> Homo sapiens

<400> 15
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 gccaccgctt ccaggttggg ggaggtgttt cactctgaaa aagagacgaa gagctcaaga 240
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acagaagcag tacatcaaca attccaaaag tttttgactg aaataagcaa actcactaat 360
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<210> 16
 <211> 175
 <212> PRT
 <213> Homo sapiens

<400> 16
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 20 25 30

 Gly Ile Leu Thr Ala Ile Gly Met Val Leu Leu Gly Thr Arg Gly Ala
 35 40 45

 Thr Ala Ser Gln Leu Glu Glu Val Phe His Ser Glu Lys Glu Thr Lys
 50 55 60

 Ser Ser Arg Ile Lys Ala Glu Glu Lys Glu Val Val Arg Ile Lys Ala
 65 70 75 80

 Glu Gly Lys Glu Ile Glu Asn Thr Glu Ala Val His Gln Gln Phe Gln
 85 90 95

 Lys Phe Leu Thr Glu Ile Ser Lys Leu Thr Asn Asp Tyr Glu Leu Asn
 100 105 110

 Ile Thr Asn Arg Leu Phe Gly Glu Lys Thr Tyr Leu Phe Leu Gln Lys
 115 120 125

 Tyr Leu Asp Tyr Val Glu Lys Tyr Tyr His Ala Ser Leu Glu Pro Val
 130 135 140

 Asp Phe Val Asn Ala Ala Asp Glu Ser Arg Lys Lys Ile Asn Ser Trp
 145 150 155 160

 Val Glu Ser Lys Thr Asn Asp Val Glu Thr Glu Ala Gln Arg Val
 165 170 175

<210> 17
 <211> 5316
 <212> DNA
 <213> Homo sapiens

<400> 17

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Met Ala Ser Pro Arg Gly Leu Val Val Arg Asp Val Gly Ser His Ser
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Ala Trp Val Gly Ala Gln Gly Pro Leu Gln Ala Ser Leu Leu Pro Leu
  20             25            30

Gly Ile Thr Asn Val Leu Ser Leu Phe Cys Ala Ala Leu Thr Glu His
  35             40            45

Lys Val Leu Phe Leu Ser Arg Ser Tyr Gln Arg Leu Ala Asp Ala Cys
  50             55            60

Arg Gly Leu Leu Ala Leu Leu Phe Pro Leu Arg Tyr Ser Phe Thr Tyr
  65             70            75            80

Val Pro Ile Leu Pro Ala Gln Leu Leu Glu Val Leu Ser Thr Pro Thr
  85             90            95

Pro Phe Ile Ile Gly Val Asn Ala Ala Phe Gln Ala Glu Thr Gln Glu
 100            105            110

Leu Leu Asp Val Ile Val Ala Asp Leu Asp Gly Gly Thr Val Thr Ile
 115            120            125

Pro Glu Cys Val His Ile Pro Pro Leu Pro Glu Pro Leu Gln Ser Gln
 130            135            140

Thr His Ser Val Leu Ser Met Val Leu Asp Pro Glu Leu Glu Leu Ala
 145            150            155            160

Asp Leu Ala Phe Pro Pro Pro Thr Thr Ser Thr Ser Ser Leu Lys Met
 165            170            175

Gln Asp Lys Glu Leu Arg Ala Val Phe Leu Arg Leu Phe Ala Gln Leu
 180            185            190

Leu Gln Gly Tyr Arg Trp Cys Leu His Val Val Arg Ile His Pro Glu
 195            200            205

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Pro Val Ile Arg Phe His Lys Ala Ala Phe Leu Gly Gln Arg Gly Leu
 210 215 220
 Val Glu Asp Asp Phe Leu Met Lys Val Leu Glu Gly Met Ala Phe Ala
 225 230 235 240
 Gly Phe Val Ser Glu Arg Gly Val Pro Tyr Arg Pro Thr Asp Leu Phe
 245 250 255
 Asp Glu Leu Val Ala His Glu Val Ala Arg Met Arg Ala Asp Glu Asn
 260 265 270
 His Pro Gln Arg Val Leu Arg His Val Gln Glu Leu Ala Glu Gln Leu
 275 280 285
 Tyr Lys Asn Glu Asn Pro Tyr Pro Ala Val Ala Met His Lys Val Gln
 290 295 300
 Arg Pro Gly Glu Ser Ser His Leu Arg Arg Val Pro Arg Pro Phe Pro
 305 310 315 320
 Arg Leu Asp Glu Gly Thr Val Gln Trp Ile Val Asp Gln Ala Ala Ala
 325 330 335
 Lys Met Gln Gly Ala Pro Pro Ala Val Lys Ala Glu Arg Arg Thr Thr
 340 345 350
 Val Pro Ser Gly Pro Pro Met Thr Ala Ile Leu Glu Arg Cys Ser Gly
 355 360 365
 Leu His Val Asn Ser Ala Arg Arg Leu Glu Val Val Arg Asn Cys Ile
 370 375 380
 Ser Tyr Val Phe Glu Gly Lys Met Leu Glu Ala Lys Lys Leu Leu Pro
 385 390 395 400
 Ala Val Leu Arg Ala Leu Lys Gly Arg Ala Ala Arg Arg Cys Leu Ala
 405 410 415
 Gln Glu Leu His Leu His Val Gln Gln Asn Arg Ala Val Leu Asp His
 420 425 430
 Gln Gln Phe Asp Phe Val Val Arg Met Met Asn Cys Cys Leu Gln Asp
 435 440 445
 Cys Thr Ser Leu Asp Glu His Gly Ile Ala Ala Ala Leu Leu Pro Leu
 450 455 460
 Val Thr Ala Phe Cys Arg Lys Leu Ser Pro Gly Val Thr Gln Phe Ala
 465 470 475 480
 Tyr Ser Cys Val Gln Glu His Val Val Trp Ser Thr Pro Gln Phe Trp
 485 490 495
 Glu Ala Met Phe Tyr Gly Asp Val Gln Thr His Ile Arg Ala Leu Tyr
 500 505 510

Leu Glu Pro Thr Glu Asp Leu Ala Pro Ala Gln Glu Val Gly Glu Ala
 515 520 525
 Pro Ser Gln Glu Asp Glu Arg Ser Ala Leu Asp Val Ala Ser Glu Gln
 530 535 540
 Arg Arg Leu Trp Pro Thr Leu Ser Arg Glu Lys Gln Gln Glu Leu Val
 545 550 555 560
 Gln Lys Glu Glu Ser Thr Val Phe Ser Gln Ala Ile His Tyr Ala Asn
 565 570 575
 Arg Met Ser Tyr Leu Leu Leu Pro Leu Asp Ser Ser Lys Ser Arg Leu
 580 585 590
 Leu Arg Glu Arg Ala Gly Leu Gly Asp Leu Glu Ser Ala Ser Asn Ser
 595 600 605
 Leu Val Thr Asn Ser Met Ala Gly Ser Val Ala Glu Ser Tyr Asp Thr
 610 615 620
 Glu Ser Gly Phe Glu Asp Ala Glu Thr Cys Asp Val Ala Gly Ala Val
 625 630 635 640
 Val Arg Phe Ile Asn Arg Phe Val Asp Lys Val Cys Thr Glu Ser Gly
 645 650 655
 Val Thr Ser Asp His Leu Lys Gly Leu His Val Met Val Pro Asp Ile
 660 665 670
 Val Gln Met His Ile Glu Thr Leu Glu Ala Val Gln Arg Glu Ser Arg
 675 680 685
 Arg Leu Pro Pro Ile Gln Lys Pro Lys Leu Leu Arg Pro Arg Leu Leu
 690 695 700
 Pro Gly Glu Glu Cys Val Leu Asp Gly Leu Arg Val Tyr Leu Leu Pro
 705 710 715 720
 Asp Gly Arg Glu Glu Gly Ala Gly Gly Ser Ala Gly Gly Pro Ala Leu
 725 730 735
 Leu Pro Ala Glu Gly Ala Val Phe Leu Thr Thr Tyr Arg Val Ile Phe
 740 745 750
 Thr Gly Met Pro Thr Asp Pro Leu Val Gly Glu Gln Val Val Val Arg
 755 760 765
 Ser Phe Pro Val Ala Ala Leu Thr Lys Glu Lys Arg Ile Ser Val Gln
 770 775 780
 Thr Pro Val Asp Gln Leu Leu Gln Asp Gly Leu Gln Leu Arg Ser Cys
 785 790 795 800
 Thr Phe Gln Leu Leu Lys Met Ala Phe Asp Glu Glu Val Gly Ser Asp
 805 810 815

Ser Ala Glu Leu Phe Arg Lys Gln Leu His Lys Leu Arg Tyr Pro Pro
 820 825 830
 Asp Ile Arg Ala Thr Phe Ala Phe Thr Leu Gly Ser Ala His Thr Pro
 835 840 845
 Gly Arg Pro Pro Arg Val Thr Lys Asp Lys Gly Pro Ser Leu Arg Thr
 850 855 860
 Leu Ser Arg Asn Leu Val Lys Asn Ala Lys Lys Thr Ile Gly Arg Gln
 865 870 875 880
 His Val Thr Arg Lys Lys Tyr Asn Pro Pro Ser Trp Glu His Arg Gly
 885 890 895
 Gln Pro Pro Pro Glu Asp Gln Glu Asp Glu Ile Ser Val Ser Glu Glu
 900 905 910
 Leu Glu Pro Ser Thr Leu Thr Pro Ser Ser Ala Leu Lys Pro Ser Asp
 915 920 925
 Arg Met Thr Met Ser Ser Leu Val Glu Arg Ala Cys Cys Arg Asp Tyr
 930 935 940
 Gln Arg Leu Gly Leu Gly Thr Leu Ser Ser Ser Leu Ser Arg Ala Lys
 945 950 955 960
 Ser Glu Pro Phe Arg Ile Ser Pro Val Asn Arg Met Tyr Ala Ile Cys
 965 970 975
 Arg Ser Tyr Pro Gly Leu Leu Ile Val Pro Gln Ser Val Gln Asp Asn
 980 985 990
 Ala Leu Gln Arg Val Ser Arg Cys Tyr Arg Gln Asn Arg Phe Pro Val
 995 1000 1005
 Val Cys Trp Arg Ser Gly Arg Ser Lys Ala Val Leu Leu Arg Ser Gly
 1010 1015 1020
 Gly Leu His Gly Lys Gly Val Val Gly Leu Phe Lys Ala Gln Asn Ala
 1025 1030 1035 1040
 Pro Ser Pro Gly Gln Ser Gln Ala Asp Ser Ser Ser Leu Glu Gln Glu
 1045 1050 1055
 Lys Tyr Leu Gln Ala Val Val Ser Ser Met Pro Arg Tyr Ala Asp Ala
 1060 1065 1070
 Ser Gly Arg Asn Thr Leu Ser Gly Phe Ser Ser Ala His Met Gly Ser
 1075 1080 1085
 His Gly Lys Trp Gly Ser Val Arg Thr Ser Gly Arg Ser Ser Gly Leu
 1090 1095 1100
 Gly Thr Asp Val Gly Ser Arg Leu Ala Gly Arg Asp Ala Leu Ala Pro
 1105 1110 1115 1120

Pro Gln Ala Asn Gly Gly Pro Pro Asp Pro Gly Phe Leu Arg Pro Gln
 1125 1130 1135
 Arg Ala Ala Leu Tyr Ile Leu Gly Asp Lys Ala Gln Leu Lys Gly Val
 1140 1145 1150
 Arg Ser Asp Pro Leu Gln Gln Trp Glu Leu Val Pro Ile Glu Val Phe
 1155 1160 1165
 Glu Ala Arg Gln Val Lys Ala Ser Phe Lys Lys Leu Leu Lys Ala Cys
 1170 1175 1180
 Val Pro Gly Cys Pro Ala Ala Glu Pro Ser Pro Ala Ser Phe Leu Arg
 1185 1190 1195 1200
 Ser Leu Glu Asp Ser Glu Trp Leu Ile Gln Ile His Lys Leu Leu Gln
 1205 1210 1215
 Val Ser Val Leu Val Val Glu Leu Leu Asp Ser Gly Ser Ser Val Leu
 1220 1225 1230
 Val Gly Leu Glu Asp Gly Trp Asp Ile Thr Thr Gln Val Val Ser Leu
 1235 1240 1245
 Val Gln Leu Leu Ser Asp Pro Phe Tyr Arg Thr Leu Glu Gly Phe Arg
 1250 1255 1260
 Leu Leu Val Glu Lys Glu Trp Leu Ser Phe Gly His Arg Phe Ser His
 1265 1270 1275 1280
 Arg Gly Ala His Thr Leu Ala Gly Gln Ser Ser Gly Phe Thr Pro Val
 1285 1290 1295
 Phe Leu Gln Phe Leu Asp Cys Val His Gln Val His Leu Gln Phe Pro
 1300 1305 1310
 Met Glu Phe Glu Phe Ser Gln Phe Tyr Leu Lys Phe Leu Gly Tyr His
 1315 1320 1325
 His Val Ser Arg Arg Phe Arg Thr Phe Leu Leu Asp Ser Asp Tyr Glu
 1330 1335 1340
 Arg Ile Glu Leu Gly Leu Leu Tyr Glu Glu Lys Gly Glu Arg Arg Gly
 1345 1350 1355 1360
 Gln Val Pro Cys Arg Ser Val Trp Glu Tyr Val Asp Arg Leu Ser Lys
 1365 1370 1375
 Arg Thr Pro Val Phe His Asn Tyr Met Tyr Ala Pro Glu Asp Ala Glu
 1380 1385 1390
 Val Leu Arg Pro Tyr Ser Asn Val Ser Asn Leu Lys Val Trp Asp Phe
 1395 1400 1405
 Tyr Thr Glu Glu Thr Leu Ala Glu Gly Pro Pro Tyr Asp Trp Glu Leu
 1410 1415 1420

Ala Gln Gly Pro Pro Glu Pro Pro Glu Glu Glu Arg Ser Asp Gly Gly
 1425 1430 1435 1440
 Ala Pro Gln Ser Arg Arg Arg Val Val Trp Pro Cys Tyr Asp Ser Cys
 1445 1450 1455
 Pro Arg Ala Gln Pro Asp Ala Ile Ser Arg Leu Leu Glu Glu Leu Gln
 1460 1465 1470
 Arg Leu Glu Thr Glu Leu Gly Gln Pro Ala Glu Arg Trp Lys Asp Thr
 1475 1480 1485
 Trp Asp Arg Val Lys Ala Ala Gln Arg Leu Glu Gly Arg Pro Asp Gly
 1490 1495 1500
 Arg Gly Thr Pro Ser Ser Leu Leu Val Ser Thr Ala Pro His His Arg
 1505 1510 1515 1520
 Arg Ser Leu Gly Val Tyr Leu Gln Glu Gly Pro Val Gly Ser Thr Leu
 1525 1530 1535
 Ser Leu Ser Leu Asp Ser Asp Gln Ser Ser Gly Ser Thr Thr Ser Gly
 1540 1545 1550
 Ser Arg Gln Ala Ala Arg Arg Ser Thr Ser Thr Leu Tyr Ser Gln Phe
 1555 1560 1565
 Gln Thr Ala Glu Ser Glu Asn Arg Ser Tyr Glu Gly Thr Leu Tyr Lys
 1570 1575 1580
 Lys Gly Ala Phe Met Lys Pro Trp Lys Ala Arg Trp Phe Val Leu Asp
 1585 1590 1595 1600
 Lys Thr Lys His Gln Leu Arg Tyr Tyr Asp His Arg Val Asp Thr Glu
 1605 1610 1615
 Cys Lys Gly Val Ile Asp Leu Ala Glu Val Glu Ala Val Ala Pro Gly
 1620 1625 1630
 Thr Pro Thr Met Gly Ala Pro Lys Thr Val Asp Glu Lys Ala Phe Phe
 1635 1640 1645
 Asp Val Lys Thr Thr Arg Arg Val Tyr Asn Phe Cys Ala Gln Asp Val
 1650 1655 1660
 Pro Ser Ala Gln Gln Trp Val Asp Arg Ile Gln Ser Cys Leu Ser Asp
 1665 1670 1675 1680
 Ala

<210> 21
 <211> 762
 <212> DNA
 <213> Homo sapiens

<400> 21
gacacacccat gcagtgcttc aaattcatta aggtcatgat gttcctcttc aatcaactca 60
tctttctctg tgggtgcagcc ctgttggtg tgggaatatg ggtaaccgtc gatgggacat 120
ctttcctgaa ggtcttcgga tcaactatcat ccagtgccat gcagtttgtc aacgtgggct 180
acttcctcat cgcgcgtggt gctgtgctct tcatttttgg tttcctgggc tgctatgggtg 240
ctccctctga gaaacaagtg tgtgctctgg tgatgttctt ttccatcctc ctcacatct 300
tcacgctga gattgcaggt gctgtgggtg ctttggtgta caccacattg gctgaacaat 360
tcctgacact cctgggtggtg cctgctatcg aaaaagacta tggttaccag actgatttca 420
cccaagtatg gaacactaca atggaagagt tgcattgctg tggctttaac aactacacag 480
attttaatgc ctcacgtttc gtcaaagaga ataaagtctt cccccaccc tgttggtgcca 540
accctggcaa ccatacagtt gaaccatgca ccgaggagaa ggccaaaagt atgaaagtac 600
agggttgttt caaagagatt ctgcatagaa tcagaaacaa tgcagtcact gtgggtgggtg 660
tggcagttgg agttgcggcc ctagagctgg ctgccatggg tgtatccatg tatctatact 720
gcaatctgaa ataagactac tacttcctcc tgacttgctg cc 762

<210> 22
<211> 241
<212> PRT
<213> Homo sapiens

<400> 22
Met Gln Cys Phe Lys Phe Ile Lys Val Met Met Phe Leu Phe Asn Gln
1 5 10 15
Leu Ile Phe Leu Cys Gly Ala Ala Leu Leu Ala Val Gly Ile Trp Val
20 25 30
Thr Val Asp Gly Thr Ser Phe Leu Lys Val Phe Gly Ser Leu Ser Ser
35 40 45
Ser Ala Met Gln Phe Val Asn Val Gly Tyr Phe Leu Ile Ala Ala Gly
50 55 60
Ala Val Leu Phe Ile Phe Gly Phe Leu Gly Cys Tyr Gly Ala Pro Ser
65 70 75 80
Glu Lys Gln Val Cys Ala Leu Val Met Phe Phe Ser Ile Leu Leu Ile
85 90 95
Ile Phe Ile Ala Glu Ile Ala Gly Ala Val Val Ala Leu Val Tyr Thr
100 105 110
Thr Leu Ala Glu Gln Phe Leu Thr Leu Leu Val Val Pro Ala Ile Glu
115 120 125
Lys Asp Tyr Gly Tyr Gln Thr Asp Phe Thr Gln Val Trp Asn Thr Thr
130 135 140
Met Glu Glu Leu His Cys Cys Gly Phe Asn Asn Tyr Thr Asp Phe Asn
145 150 155 160
Ala Ser Arg Phe Val Lys Glu Asn Lys Val Phe Pro Pro Pro Cys Cys
165 170 175
Ala Asn Pro Gly Asn His Thr Val Glu Pro Cys Thr Glu Glu Lys Ala

180 185 190

Lys Ser Met Lys Val Gln Gly Cys Phe Lys Glu Ile Leu His Arg Ile
195 200 205

Arg Asn Asn Ala Val Thr Val Gly Gly Val Ala Val Gly Val Ala Ala
210 215 220

Leu Glu Leu Ala Ala Met Val Val Ser Met Tyr Leu Tyr Cys Asn Leu
225 230 235 240

Lys

<210> 23
<211> 469
<212> DNA
<213> Homo sapiens

<400> 23
gccatctgcc aaccatgggc accactcagc agctgctagg aagatggcgc ccagcagaga 60
ggaaatacct caaagaaaca gggatgagaa tggccctgca aaaaattggt gcaatgacta 120
aaccagatgg tgccatctct gatggcaaaa gcttcactat aaaaaccaag agcactctga 180
aaacaacacg gttttcttct aaacttggag agaagtatga aagaactaca ggtgatggca 240
gaaaaaactc actatttgtc tgcaacttta caaagcgtgc attggttcaa cactgggaat 300
gggatgagga aagaaaaacg agaagaagaa aagtgggaga caaaaaagca gggatggaat 360
gcattatgaa caatgtcacc tgtactcaga tctgtgaaaa taaaaaaagc agaataaaaa 420
tttccttact gctttggaga gcaattagct gagagaagga acaatttca 469

<210> 24
<211> 145
<212> PRT
<213> Homo sapiens

<400> 24
Met Val Thr Thr Gln Gln Leu Leu Gly Arg Trp Arg Pro Ala Glu Arg
1 5 10 15

Lys Tyr Leu Lys Glu Thr Gly Met Arg Met Ala Leu Gln Lys Ile Gly
20 25 30

Ala Met Thr Lys Pro Asp Gly Ala Ile Ser Asp Gly Lys Ser Phe Thr
35 40 45

Ile Lys Thr Lys Ser Thr Leu Lys Thr Thr Arg Phe Ser Ser Lys Leu
50 55 60

Gly Glu Lys Tyr Glu Arg Thr Thr Gly Asp Gly Arg Lys Asn Ser Leu
65 70 75 80

Phe Val Cys Asn Phe Thr Lys Arg Ala Leu Val Gln His Trp Glu Trp
85 90 95

Asp Glu Glu Arg Lys Thr Arg Arg Arg Lys Val Gly Asp Lys Lys Ala
100 105 110

Gly Met Glu Cys Ile Met Asn Asn Val Thr Cys Thr Gln Ile Cys Glu
 115 120 125

Asn Lys Lys Ser Arg Ile Lys Ile Ser Leu Leu Leu Trp Arg Ala Ile
 130 135 140

Ser
 145

<210> 25
 <211> 816
 <212> DNA
 <213> Homo sapiens

<400> 25
 atgggggggcc tgacagcctc ggacgtacac ccgaccctgg ggggccagct cttctcagct 60
 ggaatagcgg cgtgcttggc ggacgtgatc accttcccgc tggacacggc caaagtccgg 120
 ctccaggtcc aagggtgaatg cccgacgtcc agtggtatta ggtataaagg tgtcctggga 180
 acaatcaccg ctgtggtaaa aacagaaggg cggatgaaac tctacagcgg gctgcctgcg 240
 gggcttcagc ggcaaatcag ctccgcctct ctcaggatcg gcctctacga cacgggtccag 300
 gagttcctca ccgcagggaa agaaacagca cctagtttag gaagcaagat ttagctggt 360
 ctaacgactg gaggagtggc agtattcatt gggcaaccca cagaggtcgt gaaagtcaga 420
 cttcaagcac agagccatct ccacggaatc aaacctcgct acacggggac ttataatgcg 480
 tacagaataa tagcaacaac cgaaggcttg acgggtcttt ggaaaggac tactccaat 540
 ctgatgagaa gtgtcatcat caattgtaca gagctagtaa catatgatct aatgaaggag 600
 gcctttgtga aaaacaacat attagcagga cagtacaaaa gtgtgcccaa ctgtgcaatg 660
 aaagtgttca ctaacgaagg accaacggct ttcttcaagg ggttggtacc ttccttcttg 720
 cgacttggat cctggaacgt cattatgttt gtgtgctttg aacaactgaa acgagaactg 780
 tcaaagtcaa ggcagactat ggactgtgac acataa 816

<210> 26
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 26
 Met Gly Gly Leu Thr Ala Ser Asp Val His Pro Thr Leu Gly Val Gln
 1 5 10 15
 Leu Phe Ser Ala Gly Ile Ala Ala Cys Leu Ala Asp Val Ile Thr Phe
 20 25 30
 Pro Leu Asp Thr Ala Lys Val Arg Leu Gln Val Gln Gly Glu Cys Pro
 35 40 45
 Thr Ser Ser Val Ile Arg Tyr Lys Gly Val Leu Gly Thr Ile Thr Ala
 50 55 60
 Val Val Lys Thr Glu Gly Arg Met Lys Leu Tyr Ser Gly Leu Pro Ala
 65 70 75 80
 Gly Leu Gln Arg Gln Ile Ser Ser Ala Ser Leu Arg Ile Gly Leu Tyr
 85 90 95

Asp Thr Val Gln Glu Phe Leu Thr Ala Gly Lys Glu Thr Ala Pro Ser
 100 105 110
 Leu Gly Ser Lys Ile Leu Ala Gly Leu Thr Thr Gly Gly Val Ala Val
 115 120 125
 Phe Ile Gly Gln Pro Thr Glu Val Val Lys Val Arg Leu Gln Ala Gln
 130 135 140
 Ser His Leu His Gly Ile Lys Pro Arg Tyr Thr Gly Thr Tyr Asn Ala
 145 150 155 160
 Tyr Arg Ile Ile Ala Thr Thr Glu Gly Leu Thr Gly Leu Trp Lys Gly
 165 170 175
 Thr Thr Pro Asn Leu Met Arg Ser Val Ile Ile Asn Cys Thr Glu Leu
 180 185 190
 Val Thr Tyr Asp Leu Met Lys Glu Ala Phe Val Lys Asn Asn Ile Leu
 195 200 205
 Ala Gly Gln Tyr Lys Ser Val Pro Asn Cys Ala Met Lys Val Phe Thr
 210 215 220
 Asn Glu Gly Pro Thr Ala Phe Phe Lys Gly Leu Val Pro Ser Phe Leu
 225 230 235 240
 Arg Leu Gly Ser Trp Asn Val Ile Met Phe Val Cys Phe Glu Gln Leu
 245 250 255
 Lys Arg Glu Leu Ser Lys Ser Arg Gln Thr Met Asp Cys Ala Thr
 260 265 270

<210> 27
 <211> 1859
 <212> DNA
 <213> Homo sapiens

<400> 27
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 ccggtacttg caagcctcgc tcagtcttaa gcaagagggg atggattcgc ccgcagcact 120
 gagaatccag gggcaggcgg gatggcggtt aggcgctgtt gctagaaatc tctgtcttta 180
 ctctgttttg gtcattacgg agggaagaca gccccaaaag ggaaagtgtc ccctgcgctg 240
 ctctgtctct aaagacagcg ccctgtgtga gggctccccg gacctgcccg tcagcttctc 300
 tccgaccctg ctgtcactct cactcgtcag gacgggagtc acccagctga aggccggcag 360
 cttcctgaga attccgtctc tgcacctgct cctcttcacc tccaactcct tctccgtgat 420
 tgaggacgat gcatttgcgg gcctgtccca cctgcagtac ctcttcatcg aggacaatga 480
 gattggctcc atctctaaga atgccctcag aggacttcgc tcgcttacac acctaagcct 540
 ggccaataac catctggaga ccctccccag attcctgttc cgaggccttg acacccttac 600
 tcatgtggac ctccgcggga acccgttcca gtgtgactgc cgcgtcctct ggctcctgca 660
 gtggatgcc accgtgaatg ccagcgtggg gaccggcgcc tgtgcggggc ccgcctccct 720
 gagccacatg cagctccacc acctcgacct caagactttc aagtgcagag ccatagagct 780
 gtcttggttc cagacggtgg gggagtcggc actgagcgta gagcccttct cctaccaagg 840
 ggagcctcac attgtgctgg cacagccctt cgccggccgc tgcctgattc tctcctggga 900
 ctacagcctg cagcgccttc ggcccagga agagctgccc gcggcctccg tgggtgcctg 960
 caagccactg gtgctggggc cgagcctctt cgtgctggct gcccgcctgt gggggggctc 1020

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acagctgtgg gcccgccca gtcccgccct ggcctggcc ccaacgcaga ccctggcccc 1080
gcgggcgctg ctgcgccca atgacgccga gtcctgtgg ctggaagggc aaccctgctt 1140
cgtggtggcc gatgctcca aggcgggcag caccacgctg ctgtgccgag acggggcccg 1200
cttttaccg caccagagcc tgcacgctg gcaccgggac acggacgctg aggccttgga 1260
gctggacggc cggccccacc tgcctgtggc ctccgcttcc cagcggcccg tgctcttcca 1320
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cacacgccac ttccaggctg gtggggacgt gttcctgtgc ctcacacgct acattgggga 1440
ctccatggtc atgcgctggg acggctccat gtttcgtctg ctgcagcaac ttccctcgcg 1500
cggtgcccc gtcttccagc cactgctcat cgccaggac cagctggcca tcctaggcag 1560
cgacttcgcc ttacagccagg tcctccgctt tgagcctgac aaggggctcc tggagccact 1620
gcaggagctg gggcctccgg ccctggtggc ccccgctgcc tttgcccaca tcactatggc 1680
cggcagacgc ttctctttg ctgcttgctt taagggcccc acacagatct accagcatca 1740
cgagatcgac ctcagtgcct gagaccacca acgggactct gggcatggct gggggccctg 1800
gacggccctt tggctggctc ctggccctac ttggggtgat ggcccgctg tgagctgct 1859

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<210> 28
<211> 553
<212> PRT
<213> Homo sapiens

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<400> 28
Met Asp Ser Pro Ala Ala Leu Arg Ile Gln Gly Gln Ala Gly Trp Arg
 1             5             10             15

Ser Gly Ala Val Ala Arg Asn Leu Cys Leu Tyr Ser Val Leu Val Ile
      20             25             30

Thr Glu Gly Arg Gln Pro Pro Lys Gly Lys Cys Pro Leu Arg Cys Ser
      35             40             45

Cys Ser Lys Asp Ser Ala Leu Cys Glu Gly Ser Pro Asp Leu Pro Val
      50             55             60

Ser Phe Ser Pro Thr Leu Leu Ser Leu Ser Leu Val Arg Thr Gly Val
      65             70             75             80

Thr Gln Leu Lys Ala Gly Ser Phe Leu Arg Ile Pro Ser Leu His Leu
      85             90             95

Leu Leu Phe Thr Ser Asn Ser Phe Ser Val Ile Glu Asp Asp Ala Phe
      100            105            110

Ala Gly Leu Ser His Leu Gln Tyr Leu Phe Ile Glu Asp Asn Glu Ile
      115            120            125

Gly Ser Ile Ser Lys Asn Ala Leu Arg Gly Leu Arg Ser Leu Thr His
      130            135            140

Leu Ser Leu Ala Asn Asn His Leu Glu Thr Leu Pro Arg Phe Leu Phe
      145            150            155            160

Arg Gly Leu Asp Thr Leu Thr His Val Asp Leu Arg Gly Asn Pro Phe
      165            170            175

Gln Cys Asp Cys Arg Val Leu Trp Leu Leu Gln Trp Met Pro Thr Val
      180            185            190

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Asn Ala Ser Val Gly Thr Gly Ala Cys Ala Gly Pro Ala Ser Leu Ser
 195 200 205
 His Met Gln Leu His His Leu Asp Pro Lys Thr Phe Lys Cys Arg Ala
 210 215 220
 Ile Glu Leu Ser Trp Phe Gln Thr Val Gly Glu Ser Ala Leu Ser Val
 225 230 235 240
 Glu Pro Phe Ser Tyr Gln Gly Glu Pro His Ile Val Leu Ala Gln Pro
 245 250 255
 Phe Ala Gly Arg Cys Leu Ile Leu Ser Trp Asp Tyr Ser Leu Gln Arg
 260 265 270
 Phe Arg Pro Glu Glu Glu Leu Pro Ala Ala Ser Val Val Ser Cys Lys
 275 280 285
 Pro Leu Val Leu Gly Pro Ser Leu Phe Val Leu Ala Ala Arg Leu Trp
 290 295 300
 Gly Gly Ser Gln Leu Trp Ala Arg Pro Ser Pro Gly Leu Arg Leu Ala
 305 310 315 320
 Pro Thr Gln Thr Leu Ala Pro Arg Arg Leu Leu Arg Pro Asn Asp Ala
 325 330 335
 Glu Leu Leu Trp Leu Glu Gly Gln Pro Cys Phe Val Val Ala Asp Ala
 340 345 350
 Ser Lys Ala Gly Ser Thr Thr Leu Leu Cys Arg Asp Gly Pro Gly Phe
 355 360 365
 Tyr Pro His Gln Ser Leu His Ala Trp His Arg Asp Thr Asp Ala Glu
 370 375 380
 Ala Leu Glu Leu Asp Gly Arg Pro His Leu Leu Leu Ala Ser Ala Ser
 385 390 395 400
 Gln Arg Pro Val Leu Phe His Trp Thr Gly Gly Arg Phe Glu Arg Arg
 405 410 415
 Thr Asp Ile Pro Arg Ala Glu Asp Val Tyr Ala Thr Arg His Phe Gln
 420 425 430
 Ala Gly Gly Asp Val Phe Leu Cys Leu Thr Arg Tyr Ile Gly Asp Ser
 435 440 445
 Met Val Met Arg Trp Asp Gly Ser Met Phe Arg Leu Leu Gln Gln Leu
 450 455 460
 Pro Ser Arg Gly Ala His Val Phe Gln Pro Leu Leu Ile Ala Arg Asp
 465 470 475 480
 Gln Leu Ala Ile Leu Gly Ser Asp Phe Ala Phe Ser Gln Val Leu Arg
 485 490 495

Leu Glu Pro Asp Lys Gly Leu Leu Glu Pro Leu Gln Glu Leu Gly Pro
500 505 510

Pro Ala Leu Val Ala Pro Arg Ala Phe Ala His Ile Thr Met Ala Gly
515 520 525

Arg Arg Phe Leu Phe Ala Ala Cys Phe Lys Gly Pro Thr Gln Ile Tyr
530 535 540

Gln His His Glu Ile Asp Leu Ser Ala
545 550

<210> 29
<211> 1482
<212> DNA
<213> Homo sapiens

<400> 29
tcccgagact ttggaagttc tcagctatta ctttattaca taggatttct gtgtcttttc 60
tcatctcttt tccttttggg aattggaaga ccccaaagg gaaagtgtcc cctgcgctgc 120
tcctgtctta aagacagcgc cctgtgtgag ggctccccgg acctgccgt cagcttctct 180
ccgaccctgc tgtcactgac tgcccacatc ccagctcac tcgtcaggac gggagtcacc 240
cagctgaagg ccggcagctt cctgagaatt ccgtctctgc acctgctgct cttcacctcc 300
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<211> 493
<212> PRT
<213> Homo sapiens

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Ser	Leu	Thr	Ala	His	Ile	Pro	Ser	Ser	Leu	Val	Arg	Thr	Gly	Val	Thr
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Gln	Leu	Lys	Ala	Gly	Ser	Phe	Leu	Arg	Ile	Pro	Ser	Leu	His	Leu	Leu
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Leu	Phe	Thr	Ser	Asn	Ser	Phe	Ser	Val	Ile	Glu	Asp	Asp	Ala	Phe	Ala
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Ser	Ile	Ser	Lys	Asn	Ala	Leu	Arg	Gly	Leu	Arg	Ser	Leu	Thr	His	Leu
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Ser	Leu	Ala	Asn	Asn	His	Leu	Glu	Thr	Leu	Pro	Arg	Phe	Leu	Phe	Arg
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Gly	Leu	Asp	Thr	Leu	Thr	His	Val	Asp	Leu	Arg	Gly	Asn	Pro	Phe	Gln
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Cys	Asp	Cys	Arg	Val	Leu	Trp	Leu	Leu	Gln	Trp	Met	Pro	Thr	Val	Asn
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Ala	Ser	Val	Gly	Thr	Gly	Ala	Cys	Ala	Gly	Pro	Ala	Ser	Leu	Ser	His
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Pro	Gly	Leu	Arg	Leu	Ala	Pro	Thr	Gln	Thr	Leu	Ala	Pro	Arg	Arg	Leu
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Leu	Arg	Pro	Asn	Asp	Ala	Glu	Leu	Leu	Trp	Leu	Glu	Gly	Gln	Pro	Cys
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Thr	Asp	Ala	Glu	Ala	Leu	Glu	Leu	Asp	Gly	Arg	Pro	His	Leu	Leu	Leu

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Phe Glu Arg Arg Thr Asp Ile Pro Glu Ala Glu Asp Val Tyr Ala Thr					
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Arg His Phe Gln Ala Gly Gly Asp Val Phe Leu Cys Leu Thr Arg Tyr					
	370		375		380
Ile Gly Asp Ser Met Val Met Arg Trp Asp Gly Ser Met Phe Arg Leu					
	385		390		400
Leu Gln Gln Leu Pro Ser Arg Gly Ala His Val Phe Gln Pro Leu Leu					
	405		410		415
Ile Ala Arg Asp Gln Leu Ala Ile Leu Gly Ser Asp Phe Ala Phe Ser					
	420		425		430
Gln Val Leu Arg Leu Glu Pro Asp Lys Gly Leu Leu Glu Pro Leu Gln					
	435		440		445
Glu Leu Gly Pro Leu Ala Leu Val Ala Pro Arg Ala Phe Ala His Ile					
	450		455		460
Thr Met Ala Gly Arg Arg Phe Leu Phe Ala Ala Cys Phe Lys Gly Pro					
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 <211> 430
 <212> DNA
 <213> Homo sapiens

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 ccacagaagt gatgcgagc gtccacaggg ccccagctg caagtttgta cagaatcctg 240
 gcataagctg ctgtgagagc ctagaactgg aaaatacagt gtgccagttc actacaggca 300
 aacaattccc caggtgcca taccatagtg ttacctcatt agagaagata ttgacagtgc 360
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 gctttaggac 430

<210> 32
 <211> 129
 <212> PRT
 <213> Homo sapiens

<400> 32
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Lys Gly Asn Ser Ser Gly Asn Asp Lys Glu Cys Cys Asn Asp Met Thr
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 Val Trp Arg Lys Val Ser Glu Ala Asn Gly Ser Cys Lys Trp Ser Asn
 35 40 45
 Asn Phe Ile Arg Ser Ser Thr Glu Val Met Arg Arg Val His Arg Ala
 50 55 60
 Pro Ser Cys Lys Phe Val Gln Asn Pro Gly Ile Ser Cys Cys Glu Ser
 65 70 75 80
 Leu Glu Leu Glu Asn Thr Val Cys Gln Phe Thr Thr Gly Lys Gln Phe
 85 90 95
 Pro Arg Cys Gln Tyr His Ser Val Thr Ser Leu Glu Lys Ile Leu Thr
 100 105 110
 Val Leu Thr Gly His Ser Leu Met Ser Trp Leu Val Cys Gly Ser Lys
 115 120 125

Leu

<210> 33
 <211> 1860
 <212> DNA
 <213> Homo sapiens

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<210> 34
 <211> 619
 <212> PRT
 <213> Homo sapiens

<400> 34
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 35 40 45
 Leu Pro Phe Leu Thr Thr Cys Leu Ser Val Ile Asn Leu Val Arg Ala
 50 55 60
 Leu Glu Thr Val Leu Gln Asn Val Glu Gly Leu Cys Gln Ser Gly Ser
 65 70 75 80
 Thr Ser Ala Leu Pro Gln Asp Ala Phe Ser Arg Phe Pro Gly Leu Lys
 85 90 95
 Ala Glu Ala Gly Gln Ser Trp Ser Leu Pro Gly Pro Gln Ala Gly Asp
 100 105 110
 Ser Glu Ser Gly Pro His Lys Asp Glu Gly Arg Cys Thr Gly Gly Thr
 115 120 125
 Gly Ala Ala Glu Ile Gly Cys Pro Val Thr Leu Thr Asp Met Ala Glu
 130 135 140
 Leu Pro Ala Arg Met Val Ala His Phe Glu Leu Gln Glu Leu Asn Leu
 145 150 155 160
 Gly Ile Asn Arg Thr Arg His Ile Ala Leu Glu Gly Leu Ala Ser Cys
 165 170 175
 His Ser Leu Lys Ser Ser Gly Leu Arg Ser Asn Gly Leu Ile Glu Leu
 180 185 190
 Pro Arg Gly Phe Leu Ala Ala Met Pro Arg Leu Gln Arg Leu Asn Leu
 195 200 205
 Ala Asn Asn Gln Leu Arg Ser Ala Met Leu Cys Met Asn Glu Thr Gly
 210 215 220
 Phe Val Ser Gly Leu Trp Ala Leu Asp Leu Ser Lys Asn Arg Leu Cys

225 230 235 240
 Thr Leu Ser Pro Val Ile Phe Ser Cys Leu Pro His Leu Arg Glu Leu
 245 250 255
 Leu Leu Gln Gly Asn Gln Leu Val Cys Leu Lys Asp Gln Val Phe Gln
 260 265 270
 Gly Leu Gln Arg Leu Gln Thr Leu Asn Leu Gly Asn Asn Pro Leu Val
 275 280 285
 Thr Leu Gly Glu Gly Trp Leu Ala Pro Leu Pro Thr Leu Thr Thr Gln
 290 295 300
 Asn Leu Val Gly Thr His Met Val Leu Ser Pro Thr Trp Gly Phe Arg
 305 310 315 320
 Gly Pro Glu Ser Leu His Ser Leu Arg Ile Gln Phe Pro Phe Gly Pro
 325 330 335
 Ala Gly Val Ala Phe Ser Leu Leu Thr Arg Leu Thr Ser Leu Glu Leu
 340 345 350
 His Ala Val Ser Gly Met Lys His Trp Arg Leu Ser Pro Asn Val Phe
 355 360 365
 Pro Val Leu Gln Ile Leu Thr Leu Lys Gly Trp Gly Leu Gln Leu Glu
 370 375 380
 Thr Gln Asn Ile Ser Lys Ile Phe Pro Ala Leu His Gln Leu Ser Leu
 385 390 395 400
 Leu Gly Thr Pro Glu Ala Gln Val Leu Glu Gly Trp Gly Asn Arg His
 405 410 415
 Ser Pro Arg Pro Tyr Cys Ile Thr Gly Leu Pro Ser Leu Gln Glu Leu
 420 425 430
 Lys Leu Gln Ala Leu Gln Ser Gln Ala Cys Pro Cys Pro Val Arg Leu
 435 440 445
 Glu Glu Leu Val Gly Leu Glu Thr Leu Ser Ala Ala Ala Phe Gly Gly
 450 455 460
 Leu Gly Ser Leu Gln Val Leu Val Leu Asp Arg Glu Lys Asp Phe Met
 465 470 475 480
 Leu Asp Asp Ser Leu Gln Glu His Ser Pro Arg Met Pro Gln Tyr Ile
 485 490 495
 Tyr Ile Leu Thr Ser Ser Leu Ala Cys Gln Cys Ala Asn Ala Cys Leu
 500 505 510
 Cys Pro Ala Ala Ser Ala Gly Leu Leu Ala Leu Pro Lys Gly Ser Gln
 515 520 525
 Glu Phe Leu Asp Pro Leu Thr Gln Gly Leu Ala Gln Gly Leu Val Pro

530 535 540
 Glu Ser Glu Glu Ser Glu Gly Gln Asp Gln Gly Trp Met Val Gln Glu
 545 550 555 560
 Leu Leu Pro Ala Leu Glu Asp Cys Pro Pro Ala Gly Arg Gly Leu Pro
 565 570 575
 Leu Cys Leu His Glu Trp Asp Phe Glu Pro Gly Lys Asp Val Ala Asp
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<210> 35
 <211> 4660
 <212> DNA
 <213> Homo sapiens

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<210> 36

<211> 1479

<212> PRT

<213> Homo sapiens

<400> 36

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-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

20					25					30					
Leu	Val	Pro	Ser	Leu	Leu	His	Thr	Glu	Ala	Pro	Lys	Lys	Gly	Cys	Val
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Asp	Leu	Phe	His	Cys	Val	Ser	Phe	Thr	Val	Pro	Arg	Ile	Ser	Ala	Ser
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Phe	Val	Gln	Thr	Asp	Lys	Pro	Met	Tyr	Lys	Pro	Gly	Gln	Thr	Gly	Lys
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Val	Arg	Phe	Arg	Val	Val	Ser	Val	Asp	Glu	Asn	Phe	Arg	Pro	Arg	Asn
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Glu	Leu	Val	Ser	Leu	Val	Ser	Leu	Gln	Asn	Pro	Arg	Arg	Asn	Arg	Ile
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Ala	Gln	Trp	Gln	Ser	Leu	Lys	Leu	Glu	Ala	Gly	Ile	Asn	Gln	Leu	Ser
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Gln	Thr	Glu	Ser	Gly	Gly	Arg	Ile	Gln	His	Pro	Phe	Thr	Val	Glu	Glu
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	225					230					235				240
Ser	Ile	Met	Asp	Glu	Lys	Val	Asn	Ile	Thr	Val	Cys	Gly	Cys	Tyr	Arg
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Tyr	Thr	Tyr	Gly	Glu	Pro	Val	Pro	Gly	Leu	Val	Thr	Leu	Ser	Val	Cys
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Arg	Arg	Tyr	Ser	Leu	Cys	Arg	Ser	Asp	Cys	His	Asn	Thr	His	Ser	Gln
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Leu	Asn	Ser	Asn	Gly	Cys	Ile	Thr	Gln	Gln	Val	His	Thr	Lys	Met	Leu
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Gln	Ile	Thr	Asn	Thr	Gly	Phe	Glu	Met	Lys	Leu	Arg	Val	Glu	Ala	Arg
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Ile	Arg	Glu	Glu	Gly	Thr	Gly	Val	Glu	Val	Thr	Ala	Asn	Arg	Ile	Ser

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Glu	Ile	Thr	Asn	Ile	Val	Ser	Lys	Leu	Lys	Phe	Val	Lys	Val	Asp	Ser				
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His	Phe	Arg	Gln	Gly	Ile	Pro	Phe	Phe	Ala	Gln	Val	Arg	Leu	Val	Asp				
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Gly	Lys	Gly	Val	Pro	Ile	Pro	Asn	Lys	Leu	Phe	Phe	Ile	Ser	Val	Asn				
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Asp	Ala	Asn	Tyr	Tyr	Ser	Asn	Ala	Thr	Thr	Asn	Glu	Gln	Gly	Leu	Ala				
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Gln	Phe	Ser	Ile	Asn	Thr	Thr	Ser	Ile	Ser	Val	Asn	Lys	Leu	Phe	Val				
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Arg	Val	Ser	Tyr	Lys	Glu	Ser	Asn	Asn	Cys	Ser	Asp	Asn	Trp	Trp	Leu				
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Asp	Glu	Phe	His	Thr	Gln	Thr	Ser	His	Thr	Ala	Lys	His	Phe	Phe	Ser				
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Pro	Ser	Lys	Ser	Tyr	Ile	His	Leu	Lys	Pro	Ile	Ile	Gly	Thr	Leu	Thr				
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Cys	Gly	Gln	Thr	Gln	Glu	Ile	Gln	Ala	His	Tyr	Ile	Leu	Asn	Lys	Gln				
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Ile	Leu	Arg	Asp	Glu	Lys	Glu	Leu	Thr	Phe	Tyr	Tyr	Leu	Val	Lys	Ala				
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Arg	Gly	Lys	Ile	Ser	Gln	Ser	Gly	Ile	His	Val	Leu	Ser	Ile	Glu	Gln				
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Gly	Asn	Ser	Lys	Gly	Ser	Phe	Ala	Leu	Ser	Phe	Pro	Val	Glu	Ser	Asp				
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Val	Ala	Pro	Ile	Ala	Arg	Met	Phe	Ile	Phe	Ala	Ile	Leu	Pro	Asp	Gly				
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Glu	Val	Val	Gly	Asp	Ser	Glu	Lys	Phe	Glu	Ile	Glu	Asn	Cys	Leu	Ala				
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His	Ala	His	Leu	Gln	Val	Ala	Ala	Ala	Pro	Gln	Ser	Leu	Cys	Ala	Leu				
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Arg	Ala	Val	Asp	Gln	Ser	Val	Leu	Leu	Met	Lys	Pro	Glu	Ala	Glu	Leu				
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Ser	Val	Ser	Ser	Val	Tyr	Asn	Leu	Leu	Thr	Val	Lys	Asp	Leu	Thr	Asn				
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Phe	Pro	Asp	Asn	Val	Asp	Gln	Gln	Glu	Glu	Glu	Gln	Gly	His	Cys	Pro				

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Asn	Glu	Ala	Asp	Ile	Tyr	Ser	Phe	Leu	Lys	Gly	Met	Gly	Leu	Lys	Val	
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Phe	Thr	Asn	Ser	Lys	Ile	Arg	Lys	Pro	Lys	Ser	Cys	Ser	Val	Ile	Pro	
		675					680					685				
Ser	Val	Ser	Ala	Gly	Ala	Val	Gly	Gln	Gly	Tyr	Tyr	Gly	Ala	Gly	Leu	
	690					695					700					
Gly	Val	Val	Glu	Arg	Pro	Tyr	Val	Pro	Gln	Leu	Gly	Thr	Tyr	Asn	Val	
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Ile	Pro	Leu	Asn	Asn	Glu	Gln	Ser	Ser	Gly	Pro	Val	Pro	Glu	Thr	Val	
			725						730					735		
Arg	Ser	Tyr	Phe	Pro	Glu	Thr	Trp	Ile	Trp	Glu	Leu	Val	Ala	Val	Ser	
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Ser	Ser	Gly	Val	Ala	Glu	Val	Gly	Val	Thr	Val	Pro	Asp	Thr	Ile	Thr	
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Glu	Trp	Lys	Ala	Gly	Ala	Phe	Cys	Leu	Ser	Glu	Asp	Ala	Gly	Leu	Gly	
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Ile	Ser	Ser	Thr	Ala	Ser	Leu	Arg	Ala	Phe	Gln	Pro	Phe	Phe	Val	Glu	
785					790					795					800	
Leu	Thr	Met	Pro	Tyr	Ser	Val	Ile	Arg	Gly	Glu	Val	Phe	Thr	Leu	Lys	
				805					810					815		
Ala	Thr	Val	Leu	Asn	Tyr	Leu	Pro	Lys	Cys	Ile	Arg	Val	Val	Val	Gln	
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Leu	Glu	Val	Ser	Ser	Ala	Phe	Leu	Ala	Val	Pro	Thr	Glu	Lys	Asn	Glu	
	835						840					845				
Glu	Ser	His	Cys	Val	Cys	Arg	Asn	Gly	Arg	Lys	Thr	Val	Ser	Trp	Val	
	850					855					860					
Val	Thr	Pro	Lys	Ser	Leu	Gly	Asn	Val	Asn	Phe	Ser	Val	Ser	Ala	Glu	
865					870					875					880	
Ala	Met	Gln	Ser	Leu	Glu	Leu	Cys	Gly	Asn	Glu	Val	Val	Glu	Val	Pro	
				885					890					895		
Glu	Ile	Lys	Arg	Lys	Asp	Thr	Val	Ile	Lys	Thr	Leu	Leu	Val	Glu	Pro	
			900					905					910			
Glu	Gly	Ile	Ala	Lys	Glu	Glu	Thr	Phe	Asn	Thr	Leu	Pro	Cys	Ala	Ser	
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Gly	Ala	Asn	Val	Ser	Glu	Gln	Leu	Ser	Leu	Lys	Leu	Pro	Ser	Asn	Val	

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Val Lys Glu Ser Ala Arg Ala Ser Phe Ser Val Leu Gly Gly Asp Ile 945 950 955 960		
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Gly Cys Gly Glu Gln Asn Met Val Leu Phe Ala Pro Asn Ile Tyr Val 980 985 990		
Leu Asn Tyr Leu Asn Glu Thr Gln Gln Leu Thr Gln Glu Ile Lys Ala 995 1000 1005		
Lys Ala Val Gly Tyr Leu Ile Thr Gly Tyr Gln Arg Gln Leu Asn Tyr 1010 1015 1020		
Lys His Gln Asp Gly Ser Tyr Ser Thr Phe Gly Glu Arg Tyr Gly Arg 1025 1030 1035 1040		
Asn Gln Gly Asn Thr Trp Leu Thr Ala Phe Val Leu Lys Thr Phe Ala 1045 1050 1055		
Gln Ala Arg Ser Tyr Ile Phe Ile Asp Glu Ala His Ile Thr Gln Ser 1060 1065 1070		
Leu Thr Trp Leu Ser Gln Met Gln Lys Asp Asn Gly Cys Phe Arg Ser 1075 1080 1085		
Ser Gly Ser Leu Leu Asn Asn Ala Ile Lys Gly Gly Val Glu Asp Glu 1090 1095 1100		
Ala Thr Leu Ser Ala Tyr Val Thr Ile Ala Leu Leu Glu Ile Pro Leu 1105 1110 1115 1120		
Pro Val Thr Asn Pro Ile Val Arg Asn Ala Leu Phe Cys Leu Glu Ser 1125 1130 1135		
Ala Trp Asn Val Ala Lys Glu Gly Thr His Gly Ser His Val Tyr Thr 1140 1145 1150		
Lys Ala Leu Leu Ala Tyr Ala Phe Ser Leu Leu Gly Lys Gln Asn Gln 1155 1160 1165		
Asn Arg Glu Ile Leu Asn Ser Leu Asp Lys Glu Ala Val Lys Asp Asn 1170 1175 1180		
Leu Val His Trp Glu Arg Pro Gln Arg Pro Lys Ala Pro Val Gly His 1185 1190 1195 1200		
Leu Tyr Gln Thr Gln Ala Pro Ser Ala Glu Val Glu Met Thr Ser Tyr 1205 1210 1215		
Val Leu Leu Ala Tyr Leu Thr Ala Gln Pro Ala Pro Thr Ser Gly Asp 1220 1225 1230		
Leu Thr Ser Ala Thr Asn Ile Val Lys Trp Ile Met Lys Gln Gln Asn		

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Ala Gln Gly Gly Phe Ser Ser Thr Gln Asp Thr Val Val Ala Leu His		
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Ala Leu Ser Arg Tyr Gly Ala Ala Thr Phe Thr Arg Thr Glu Lys Thr		
1265	1270	1275
Ala Gln Val Thr Val Gln Asp Ser Gln Thr Phe Ser Thr Asn Phe Gln		
1285	1290	1295
Val Asp Asn Asn Asn Leu Leu Leu Leu Gln Gln Ile Ser Leu Pro Glu		
1300	1305	1310
Leu Pro Gly Glu Tyr Val Ile Thr Val Thr Gly Glu Arg Cys Val Tyr		
1315	1320	1325
Leu Gln Thr Ser Met Lys Tyr Asn Ile Leu Pro Glu Lys Glu Asp Ser		
1330	1335	1340
Pro Phe Ala Leu Lys Val Gln Thr Val Pro Gln Thr Cys Asp Gly His		
1345	1350	1355
Lys Ala His Thr Ser Phe Gln Ile Ser Leu Thr Ile Ser Tyr Thr Gly		
1365	1370	1375
Asn Arg Pro Ala Ser Asn Met Val Ile Val Asp Val Lys Met Val Ser		
1380	1385	1390
Gly Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu Glu Arg Ser Ser		
1395	1400	1405
Ser Val Ser Arg Thr Glu Val Ser Asn Asn His Val Leu Ile Tyr Val		
1410	1415	1420
Glu Gln Val Leu Thr His Gln Thr Leu His Phe Ser Phe Phe Val Glu		
1425	1430	1435
Gln Asp Ile Gln Ile Lys Asn Leu Lys Pro Ala Thr Val Lys Ala Tyr		
1445	1450	1455
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 <212> DNA
 <213> Homo sapiens

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 ggcagcgagg tgctccctga ctccttcccc tcagcgccag cagagccgct gccctacttc 180

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cacgtcacac aggaaggcct ggatgaggcc accggtctgc ggggtgcgca ggtgcagatc 360
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agcgggctgg caggg 2895

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 <211> 945
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Tyr Phe Leu Gln Glu Pro Gln Asp Ala Tyr Ile Val Lys Asn Lys Pro
 50 55 60
 Val Glu Leu Arg Cys Arg Ala Phe Pro Ala Thr Gln Ile Tyr Phe Lys
 65 70 75 80
 Cys Asn Gly Glu Trp Val Ser Gln Asn Asp His Val Thr Gln Glu Gly
 85 90 95
 Leu Asp Glu Ala Thr Gly Leu Arg Val Arg Glu Val Gln Ile Glu Val
 100 105 110
 Ser Arg Gln Gln Val Glu Glu Leu Phe Gly Leu Glu Asp Tyr Trp Cys
 115 120 125
 Gln Cys Val Ala Trp Ser Ser Ala Gly Thr Thr Lys Ser Arg Arg Ala
 130 135 140
 Tyr Val Arg Ile Ala Cys Leu Arg Lys Asn Phe Asp Gln Glu Pro Leu
 145 150 155 160
 Gly Lys Glu Val Pro Leu Asp His Glu Val Leu Leu Gln Cys Arg Pro
 165 170 175
 Pro Glu Gly Val Pro Val Ala Glu Val Glu Trp Leu Lys Asn Glu Asp
 180 185 190
 Val Ile Asp Pro Thr Gln Asp Thr Asn Phe Leu Leu Thr Ile Asp His
 195 200 205
 Asn Leu Ile Ile Arg Gln Ala Arg Leu Ser Asp Thr Ala Asn Tyr Thr
 210 215 220
 Cys Val Ala Lys Asn Ile Val Ala Lys Arg Arg Ser Thr Thr Ala Thr
 225 230 235 240
 Val Ile Val Tyr Val Asn Gly Gly Trp Ser Ser Trp Ala Glu Trp Ser
 245 250 255
 Pro Cys Ser Asn Arg Cys Gly Arg Gly Trp Gln Lys Arg Thr Arg Thr
 260 265 270
 Cys Thr Asn Pro Ala Pro Leu Asn Gly Gly Ala Phe Cys Glu Gly Gln
 275 280 285
 Ala Phe Gln Lys Thr Ala Cys Thr Thr Ile Cys Pro Val Asp Gly Ala
 290 295 300
 Trp Thr Glu Trp Ser Lys Trp Ser Ala Cys Ser Thr Glu Cys Ala His
 305 310 315 320

Trp Arg Ser Arg Glu Cys Met Ala Pro Pro Pro Gln Asn Gly Gly Arg
 325 330 335
 Asp Cys Ser Gly Thr Leu Leu Asp Ser Lys Asn Cys Thr Asp Gly Leu
 340 345 350
 Cys Met Gln Ser Glu Ser Gln Cys Gly Pro Pro Val Pro Ala Val Leu
 355 360 365
 Glu Ala Ser Gly Asp Ala Ala Leu Tyr Ala Gly Leu Val Val Ala Ile
 370 375 380
 Phe Val Val Val Ala Ile Leu Met Ala Val Gly Val Val Val Tyr Arg
 385 390 395 400
 Arg Asn Cys Arg Asp Phe Asp Thr Asp Ile Thr Asp Ser Ser Ala Ala
 405 410 415
 Leu Thr Gly Gly Phe His Pro Val Asn Phe Lys Thr Ala Arg Pro Ser
 420 425 430
 Asn Pro Gln Leu Leu His Pro Ser Val Pro Pro Asp Leu Thr Ala Ser
 435 440 445
 Ala Gly Ile Tyr Arg Gly Pro Val Tyr Ala Leu Gln Asp Ser Thr Asp
 450 455 460
 Lys Ile Pro Met Thr Asn Ser Pro Leu Leu Asp Pro Leu Pro Ser Leu
 465 470 475 480
 Lys Val Lys Val Tyr Ser Ser Ser Thr Thr Gly Ser Gly Pro Gly Leu
 485 490 495
 Ala Asp Gly Ala Asp Leu Leu Gly Val Leu Pro Pro Gly Thr Tyr Pro
 500 505 510
 Ser Asp Phe Ala Arg Asp Thr His Phe Leu His Leu Arg Ser Ala Ser
 515 520 525
 Leu Gly Ser Gln Gln Leu Leu Gly Leu Pro Arg Asp Pro Gly Ser Ser
 530 535 540
 Val Ser Gly Thr Phe Gly Cys Leu Gly Gly Arg Leu Ser Ile Pro Gly
 545 550 555 560
 Thr Gly Val Ser Leu Leu Val Pro Asn Gly Ala Ile Pro Gln Gly Lys
 565 570 575
 Phe Tyr Glu Met Tyr Leu Leu Ile Asn Lys Ala Glu Ser Thr Leu Pro
 580 585 590
 Leu Ser Glu Gly Thr Gln Thr Val Leu Ser Pro Ser Val Thr Cys Gly
 595 600 605
 Pro Thr Gly Leu Leu Leu Cys Arg Pro Val Ile Leu Thr Met Pro His
 610 615 620

Cys Ala Glu Val Ser Ala Arg Asp Trp Ile Phe Gln Leu Lys Thr Gln
 625 630 635 640
 Ala His Gln Gly His Trp Glu Glu Val Val Thr Leu Asp Glu Glu Thr
 645 650 655
 Leu Asn Thr Pro Cys Tyr Cys Gln Leu Glu Pro Arg Ala Cys His Ile
 660 665 670
 Leu Leu Asp Gln Leu Gly Thr Tyr Val Phe Thr Gly Glu Ser Tyr Ser
 675 680 685
 Arg Ser Ala Val Lys Arg Leu Gln Leu Ala Val Phe Ala Pro Ala Leu
 690 695 700
 Cys Thr Ser Leu Glu Tyr Ser Leu Arg Val Tyr Cys Leu Glu Asp Thr
 705 710 715 720
 Pro Val Ala Leu Lys Glu Val Leu Glu Leu Glu Arg Thr Leu Gly Gly
 725 730 735
 Tyr Leu Val Glu Glu Pro Lys Pro Leu Met Phe Lys Asp Ser Tyr His
 740 745 750
 Asn Leu Arg Leu Ser Leu His Asp Leu Pro His Ala His Trp Arg Ser
 755 760 765
 Lys Leu Leu Ala Lys Tyr Gln Glu Ile Pro Phe Tyr His Ile Trp Ser
 770 775 780
 Gly Ser Gln Lys Ala Leu His Cys Thr Phe Thr Leu Glu Arg His Ser
 785 790 795 800
 Leu Ala Ser Thr Glu Leu Thr Cys Lys Ile Cys Val Arg Gln Val Glu
 805 810 815
 Gly Glu Gly Gln Ile Phe Gln Leu His Thr Thr Leu Ala Glu Thr Pro
 820 825 830
 Ala Gly Ser Leu Asp Thr Leu Cys Ser Ala Pro Gly Ser Thr Val Thr
 835 840 845
 Thr Gln Leu Gly Pro Tyr Ala Phe Lys Ile Pro Leu Ser Ile Arg Gln
 850 855 860
 Lys Ile Cys Asn Ser Leu Asp Ala Pro Asn Ser Arg Gly Asn Asp Trp
 865 870 875 880
 Arg Met Leu Ala Gln Lys Leu Ser Met Asp Arg Tyr Leu Asn Tyr Phe
 885 890 895
 Ala Thr Lys Ala Ser Pro Thr Gly Val Ile Leu Asp Leu Trp Glu Ala
 900 905 910
 Leu Gln Gln Asp Asp Gly Asp Leu Asn Ser Leu Ala Ser Ala Leu Glu
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Glu Met Gly Lys Ser Glu Met Leu Val Ala Val Ala Thr Asp Gly Asp
 930 935 940

Cys
 945

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 <212> DNA
 <213> Homo sapiens

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 gagaagtttg acagggtcaaa actgaagaaa actaatactg aagaaaaaaaa tactcttccc 120
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 gttcagtaaa ta 192

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 Glu Ser Lys Ser Cys Gly Val Leu Leu Glu Thr Asn Asn Arg Gly Ser
 35 40 45

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 gccaaggacg cagcccgcgg ctacattgcc agcactgtcc cttgttcagc cgagcccacc 180
 gagcagtcct agatgcggat cgacgggttac ctaccttcct actcgccaga tcgtggcccc 240
 cgttcgggga ctgcggtcac gccctatcga gaggcgcagc gggagggtcga ggctcagcgt 300
 gaacagccgg ctgccccagc cagcagccag gggctggagc aggcgcccga gattcgccgc 360
 gtgcaggcca gcagcagtaa caccgatagc ctgccgaccc gctcgcagga cctcggttat 420
 caacaacctt cgttgagcaa ccgtgccgct caggcgttgg ccagctacag caccaccgcc 480
 gcttacgcca gcgagtagca tgcgcaggaa gtgctcggcc tcgatctcta cgcgtaacct 540
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<210> 42

<211> 114
 <212> PRT
 <213> Homo sapiens

<400> 42

Met Arg Ile Asp Gly Tyr Leu Pro Ser Tyr Ser Pro Asp Arg Gly Pro
 1 5 10 15

Arg Ser Gly Thr Ala Val Thr Pro Tyr Arg Glu Ala Gln Arg Glu Val
 20 25 30

Glu Ala Gln Arg Glu Gln Pro Ala Ala Pro Ala Ser Ser Gln Gly Leu
 35 40 45

Glu Gln Ala Pro Gln Ile Arg Arg Val Gln Ala Ser Ser Ser Asn Thr
 50 55 60

Asp Ser Leu Pro Thr Arg Ser Gln Asp Leu Gly Tyr Gln Gln Pro Thr
 65 70 75 80

Leu Ser Asn Arg Ala Ala Gln Ala Leu Ala Ser Tyr Ser Thr Thr Ala
 85 90 95

Ala Tyr Ala Ser Glu Tyr Asp Ala Gln Glu Val Leu Gly Leu Asp Leu
 100 105 110

Tyr Ala

<210> 43
 <211> 1102
 <212> DNA
 <213> Homo sapiens

<400> 43

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ccgggcacct ggccttggca agtgagcctg caccatggag gtggccacat ctgcgggggc 240
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gagctgggcg ccgacctggc cctgctgcgc ctggcctcac ccgccagcct gggccccgcc 480
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gcattcttg attctgccag aatccttttg aggcccttgt cccatatatc agtaggagtc 1020
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<210> 44
 <211> 344
 <212> PRT
 <213> Homo sapiens

<400> 44
 Met Ala Gln Lys Gly Val Leu Gly Pro Gly Gln Leu Gly Ala Val Ala
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 Asn Ser Asp Ser Tyr Ser Leu Tyr Gly Leu Val Pro Ser Gly Pro Ala
 20 25 30
 Arg Gly Pro Pro Tyr Cys Gly Arg Pro Glu Pro Ser Ala Arg Ile Val
 35 40 45
 Gly Gly Ser Asn Ala Gln Pro Gly Thr Trp Pro Trp Gln Val Ser Leu
 50 55 60
 His His Gly Gly Gly His Ile Cys Gly Gly Ser Leu Ile Ala Pro Ser
 65 70 75 80
 Trp Val Leu Ser Ala Ala His Cys Phe Met Thr Asn Gly Thr Leu Glu
 85 90 95
 Pro Ala Ala Glu Trp Ser Val Leu Leu Gly Val His Ser Gln Asp Gly
 100 105 110
 Pro Leu Asp Gly Ala His Thr Arg Ala Val Ala Ala Ile Val Val Pro
 115 120 125
 Ala Asn Tyr Ser Gln Val Glu Leu Gly Ala Asp Leu Ala Leu Leu Arg
 130 135 140
 Leu Ala Ser Pro Ala Ser Leu Gly Pro Ala Val Trp Pro Val Cys Leu
 145 150 155 160
 Pro Arg Ala Ser His Arg Phe Val His Gly Thr Ala Cys Trp Ala Thr
 165 170 175
 Gly Trp Gly Asp Val Gln Glu Ala Asp Pro Leu Pro Leu Pro Trp Val
 180 185 190
 Leu Gln Glu Val Glu Leu Arg Leu Leu Gly Glu Ala Thr Cys Gln Cys
 195 200 205
 Leu Tyr Ser Gln Pro Gly Pro Phe Asn Leu Thr Leu Gln Ile Leu Pro
 210 215 220
 Gly Met Leu Cys Ala Gly Tyr Pro Glu Gly Arg Arg Asp Thr Cys Gln
 225 230 235 240
 Gly Asp Ser Gly Gly Pro Leu Val Cys Glu Glu Gly Gly Arg Trp Phe
 245 250 255
 Gln Ala Gly Ile Thr Ser Phe Gly Phe Gly Cys Gly Arg Arg Asn Arg
 260 265 270

Pro Gly Val Phe Thr Ala Val Ala Thr Tyr Glu Ala Trp Ile Arg Glu
275 280 285

Gln Val Met Gly Ser Glu Pro Gly Pro Ala Phe Pro Thr Gln Pro Gln
290 295 300

Lys Thr Gln Ser Asp Cys Leu His Gln Thr Ala Phe Leu Asp Ser Ala
305 310 315 320

Arg Ile Leu Leu Arg Pro Leu Ser His Ile Ser Val Gly Val Ser Thr
325 330 335

Gly Thr Lys Ser Leu Val Leu Pro
340

<210> 45
<211> 1102
<212> DNA
<213> Homo sapiens

<400> 45
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cccccgact gcgggcgccc tgagccctcg gcccgcatcg tggggggctc aaacgcgcag 180
ccgggcacct ggccttgcca agtgagcctg caccatggag gtggccacat ctgcgggggc 240
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ttggagcccg cggccgagtg gtccgtactg ctgggcgtgc actcccagga cgggcccctg 360
gacggcgcg caccgccgc agtggccgcc atcgtggtgc cggccaacta cagccaagtg 420
gagctgggcg ccgacctggc cctgctgcgc ctggcctcac ccgccagcct gggccccgcc 480
gtgtggcctg tctgcctgcc ccgcgcctca caccgcttcg tgcacggcac cgcctgctgg 540
gccaccggct ggggagacgt ccaggaggca gatcctctgc ctctcccctg ggtgctacag 600
gaagtggagc taaggctgct gggcgaggcc acctgtcaat gtctctacag ccagcccggg 660
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cgcagggaca cctgccaggg tgactctggg gggcccctgg tctgtgagga aggcggcrgc 780
tggttccagg caggaatcac cagctttggg tttggctgtg gacggagaaa ccgccctgga 840
gttttccactg ctgtggctac ctatgaggca tggatacggg agcaggtgat gggttcagag 900
cctgggcctg cctttccac ccagccccag aagacccagt cagattgttt acatcaaacy 960
gcattcctgg attctgccag aatccttttg aggcccttgt cccatatac agtaggagtc 1020
tcaactggga caaaagcct tgtcctcccc tggctctctc cacactctct cctgggcctc 1080
tgggggttct gatgggcct cc 1102

<210> 46
<211> 357
<212> PRT
<213> Homo sapiens

<400> 46
Met Ala Gln Lys Gly Val Leu Gly Pro Gly Gln Leu Gly Ala Val Ala
1 5 10 15

Asn Ser Asp Ser Tyr Ser Leu Tyr Gly Leu Val Pro Ser Gly Pro Ala
20 25 30

Arg Gly Pro Pro Tyr Cys Gly Arg Pro Glu Pro Ser Ala Arg Ile Val
35 40 45

Gly Gly Ser Asn Ala Gln Pro Gly Thr Trp Pro Trp Gln Val Ser Leu
 50 55 60
 His His Gly Gly Gly His Ile Cys Gly Gly Ser Leu Ile Ala Pro Ser
 65 70 75 80
 Trp Val Leu Ser Ala Ala His Cys Phe Met Thr Asn Gly Thr Leu Glu
 85 90 95
 Pro Ala Ala Glu Trp Ser Val Leu Leu Gly Val His Ser Gln Asp Gly
 100 105 110
 Pro Leu Asp Gly Ala His Thr Arg Ala Val Ala Ala Ile Val Val Pro
 115 120 125
 Ala Asn Tyr Ser Gln Val Glu Leu Gly Ala Asp Leu Ala Leu Leu Arg
 130 135 140
 Leu Ala Ser Pro Ala Ser Leu Gly Pro Ala Val Trp Pro Val Cys Leu
 145 150 155 160
 Pro Arg Ala Ser His Arg Phe Val His Gly Thr Ala Cys Trp Ala Thr
 165 170 175
 Gly Trp Gly Asp Val Gln Glu Ala Asp Pro Leu Pro Leu Pro Trp Val
 180 185 190
 Leu Gln Glu Val Glu Leu Arg Leu Leu Gly Glu Ala Thr Cys Gln Cys
 195 200 205
 Leu Tyr Ser Gln Pro Gly Pro Phe Asn Leu Thr Leu Gln Ile Leu Pro
 210 215 220
 Gly Met Leu Cys Ala Gly Tyr Pro Glu Gly Arg Arg Asp Thr Cys Gln
 225 230 235 240
 Gly Asp Ser Gly Gly Pro Leu Val Cys Glu Glu Gly Gly Arg Trp Phe
 245 250 255
 Gln Ala Gly Ile Thr Ser Phe Gly Phe Gly Cys Gly Arg Arg Asn Arg
 260 265 270
 Pro Gly Val Phe Thr Ala Val Ala Thr Tyr Glu Ala Trp Ile Arg Glu
 275 280 285
 Gln Val Met Gly Ser Glu Pro Gly Pro Ala Phe Pro Thr Gln Pro Gln
 290 295 300
 Lys Thr Gln Ser Asp Cys Leu His Gln Thr Ala Phe Leu Asp Ser Ala
 305 310 315 320
 Arg Ile Leu Leu Arg Pro Leu Ser His Ile Ser Val Gly Val Ser Thr
 325 330 335
 Gly Thr Lys Ser Leu Val Leu Pro Trp Leu Ser Pro His Ser Leu Leu
 340 345 350

Gly Leu Trp Gly Phe
355

<210> 47
<211> 3635
<212> PRT
<213> Mus musculus

<400> 47
Asp Leu Tyr Cys Lys Leu Val Gly Gly Pro Val Ala Gly Gly Asp Pro
1 5 10 15
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20 25 30
Ser Asn Lys Ala His Pro Val Ser Asn Ala Ile Asp Gly Thr Glu Arg
35 40 45
Trp Trp Gln Ser Pro Pro Leu Ser Arg Gly Leu Glu Tyr Asn Glu Val
50 55 60
Asn Val Thr Leu Asp Leu Gly Gln Val Phe His Val Ala Tyr Val Leu
65 70 75 80
Ile Lys Phe Ala Asn Ser Pro Arg Pro Asp Leu Trp Val Leu Glu Arg
85 90 95
Ser Thr Asp Phe Gly His Thr Tyr Gln Pro Trp Gln Phe Phe Ala Ser
100 105 110
Ser Lys Arg Asp Cys Leu Glu Arg Phe Gly Pro Arg Thr Leu Glu Arg
115 120 125
Ile Thr Gln Asp Asp Asp Val Ile Cys Thr Thr Glu Tyr Ser Arg Ile
130 135 140
Val Pro Leu Glu Asn Gly Glu Ile Val Val Ser Leu Val Asn Gly Arg
145 150 155 160
Pro Gly Ala Leu Asn Phe Ser Tyr Ser Pro Leu Leu Arg Asp Phe Thr
165 170 175
Lys Ala Thr Asn Ile Arg Leu Arg Phe Leu Arg Thr Asn Thr Leu Leu
180 185 190
Gly His Leu Met Gly Lys Ala Leu Arg Asp Pro Thr Val Thr Arg Arg
195 200 205
Tyr Tyr Tyr Ser Ile Lys Asp Ile Ser Ile Gly Gly Arg Cys Val Cys
210 215 220
His Gly His Ala Asp Val Cys Asp Ala Lys Asp Pro Leu Asp Pro Phe
225 230 235 240
Arg Leu Gln Cys Ala Cys Gln His Asn Thr Cys Gly Gly Ser Cys Asp

245										250					255				
Arg	Cys	Cys	Pro	Gly	Phe	Asn	Gln	Gln	Pro	Trp	Lys	Pro	Ala	Thr	Thr				
			260					265					270						
Asp	Ser	Ala	Asn	Glu	Cys	Gln	Ser	Cys	Asn	Cys	His	Gly	His	Ala	Tyr				
		275					280					285							
Asp	Cys	Tyr	Tyr	Asp	Pro	Glu	Val	Asp	Arg	Arg	Asn	Ala	Ser	Gln	Asn				
	290					295					300								
Gln	Asp	Asn	Val	Tyr	Gln	Gly	Gly	Gly	Val	Cys	Leu	Asp	Cys	Gln	His				
305					310				315						320				
His	Thr	Thr	Gly	Ile	Asn	Cys	Glu	Arg	Cys	Leu	Pro	Gly	Phe	Phe	Arg				
				325					330					335					
Ala	Pro	Asp	Gln	Pro	Leu	Asp	Ser	Pro	His	Val	Cys	Arg	Pro	Cys	Asp				
			340					345					350						
Cys	Glu	Ser	Asp	Phe	Thr	Asp	Gly	Thr	Cys	Glu	Asp	Leu	Thr	Gly	Arg				
		355					360					365							
Cys	Tyr	Cys	Arg	Pro	Asn	Phe	Thr	Gly	Glu	Leu	Cys	Ala	Ala	Cys	Ala				
	370					375					380								
Glu	Gly	Tyr	Thr	Asp	Phe	Pro	His	Cys	Tyr	Pro	Leu	Pro	Ser	Phe	Pro				
385					390					395					400				
His	Asn	Asp	Thr	Arg	Glu	Gln	Val	Leu	Pro	Ala	Gly	Gln	Ile	Val	Asn				
				405					410					415					
Cys	Asp	Cys	Asn	Ala	Ala	Gly	Thr	Gln	Gly	Asn	Ala	Cys	Arg	Lys	Asp				
			420					425					430						
Pro	Arg	Leu	Gly	Arg	Cys	Val	Cys	Lys	Pro	Asn	Phe	Arg	Gly	Ala	His				
		435					440					445							
Cys	Glu	Leu	Cys	Ala	Pro	Gly	Phe	His	Gly	Pro	Ser	Cys	His	Pro	Cys				
	450					455					460								
Gln	Cys	Ser	Ser	Pro	Gly	Val	Ala	Asn	Ser	Leu	Cys	Asp	Pro	Glu	Ser				
465					470					475					480				
Gly	Gln	Cys	Met	Cys	Arg	Thr	Gly	Phe	Glu	Gly	Asp	Arg	Cys	Asp	His				
				485					490					495					
Cys	Ala	Leu	Gly	Tyr	Phe	His	Phe	Pro	Leu	Cys	Gln	Leu	Cys	Gly	Cys				
		500						505					510						
Ser	Pro	Ala	Gly	Thr	Leu	Pro	Glu	Gly	Cys	Asp	Glu	Ala	Gly	Arg	Cys				
		515					520					525							
Gln	Cys	Arg	Pro	Gly	Phe	Asp	Gly	Pro	His	Cys	Asp	Arg	Cys	Leu	Pro				
	530					535					540								
Gly	Tyr	His	Gly	Tyr	Pro	Asp	Cys	His	Ala	Cys	Ala	Cys	Asp	Pro	Arg				

545		550		555		560
Gly Ala Leu Asp	Gln Gln Cys Gly Val	Gly Gly Leu Cys His Cys Arg				
	565	570			575	
Pro Gly Asn Thr	Gly Ala Thr Cys Gln Glu Cys Ser Pro	Gly Phe Tyr				
	580	585			590	
Gly Phe Pro Ser Cys Ile	Pro Cys His Cys Ser Ala Asp	Gly Ser Leu				
	595	600			605	
His Thr Thr Cys Asp	Pro Thr Thr Gly Gln Cys Arg Cys Arg Pro Arg					
	610	615			620	
Val Thr Gly Leu His Cys Asp	Met Cys Val Pro Gly Ala Tyr Asn Phe					
	625	630			635	640
Pro Tyr Cys Glu Ala Gly Ser Cys His	Pro Ala Gly Leu Ala Pro Ala					
	645	650			655	
Asn Pro Ala Leu Pro Glu Thr Gln Ala	Pro Cys Met Cys Arg Ala His					
	660	665			670	
Val Glu Gly Pro Ser Cys Asp	Arg Cys Lys Pro Gly Tyr Trp Gly Leu					
	675	680			685	
Ser Ala Ser Asn Pro Glu Gly Cys Thr Arg Cys	Ser Cys Asp Pro Arg					
	690	695			700	
Gly Thr Leu Gly Gly Val Thr Glu Cys Gln Gly	Asn Gly Gln Cys Phe					
	705	710			715	720
Cys Lys Ala His Val Cys Gly Lys Thr Cys Ala Ala Cys Lys Asp Gly						
	725	730			735	
Phe Phe Gly Leu Asp Tyr Ala Asp Tyr Phe Gly Cys Arg Ser Cys Arg						
	740	745			750	
Cys Asp Val Gly Gly Ala Leu Gly Gln Gly Cys Glu Pro Lys Thr Gly						
	755	760			765	
Ala Cys Arg Cys Arg Pro Asn Thr Gln Gly Pro Thr Cys Ser Glu Pro						
	770	775			780	
Ala Lys Asp His Tyr Leu Pro Asp Leu His His Met Arg Leu Glu Leu						
	785	790			795	800
Glu Glu Ala Ala Thr Pro Glu Gly His Ala Val Arg Phe Gly Phe Asn						
	805	810			815	
Pro Leu Glu Phe Glu Asn Phe Ser Trp Arg Gly Tyr Ala His Met Met						
	820	825			830	
Ala Ile Gln Pro Arg Ile Val Ala Arg Leu Asn Val Thr Ser Pro Asp						
	835	840			845	
Leu Phe Arg Leu Val Phe Arg Tyr Val Asn Arg Gly Ser Thr Ser Val						

850	855	860
Asn Gly Gln Ile Ser Val Arg Glu Glu Gly Lys Leu Ser Ser Cys Thr 865 870 875 880		
Asn Cys Thr Glu Gln Ser Gln Pro Val Ala Phe Pro Pro Ser Thr Glu 885 890 895		
Pro Ala Phe Val Thr Val Pro Gln Arg Gly Phe Gly Glu Pro Phe Val 900 905 910		
Leu Asn Pro Gly Ile Trp Ala Leu Leu Val Glu Ala Glu Gly Val Leu 915 920 925		
Leu Asp Tyr Val Val Leu Leu Pro Ser Thr Tyr Tyr Glu Ala Ala Leu 930 935 940		
Leu Gln His Arg Val Thr Glu Ala Cys Thr Tyr Arg Pro Ser Ala Leu 945 950 955 960		
His Ser Thr Glu Asn Cys Leu Val Tyr Ala His Leu Pro Leu Asp Gly 965 970 975		
Phe Pro Ser Ala Ala Gly Thr Glu Ala Leu Cys Arg His Asp Asn Ser 980 985 990		
Leu Pro Arg Pro Cys Pro Thr Glu Gln Leu Ser Pro Ser His Pro Pro 995 1000 1005		
Leu Ala Thr Cys Phe Gly Ser Asp Val Asp Ile Gln Leu Glu Met Ala 1010 1015 1020		
Val Pro Gln Pro Gly Gln Tyr Val Leu Val Val Glu Tyr Val Gly Glu 1025 1030 1035 1040		
Asp Ser His Gln Glu Met Gly Val Ala Val His Thr Pro Gln Arg Ala 1045 1050 1055		
Pro Gln Gln Gly Val Leu Asn Leu His Pro Cys Pro Tyr Ser Ser Leu 1060 1065 1070		
Cys Arg Ser Pro Ala Arg Asp Thr Gln His His Leu Ala Ile Phe His 1075 1080 1085		
Leu Asp Ser Glu Ala Ser Ile Arg Leu Thr Ala Glu Gln Ala His Phe 1090 1095 1100		
Phe Leu His Ser Val Thr Leu Val Pro Val Glu Glu Phe Ser Thr Glu 1105 1110 1115 1120		
Phe Val Glu Pro Arg Val Phe Cys Val Ser Ser His Gly Thr Phe Asn 1125 1130 1135		
Pro Ser Ser Ala Ala Cys Leu Ala Ser Arg Phe Pro Lys Pro Pro Gln 1140 1145 1150		
Pro Ile Ile Leu Lys Asp Cys Gln Val Leu Pro Leu Pro Pro Asp Leu		

1155	1160	1165
Pro Leu Thr Gln Ser Gln Glu Leu Ser Pro Gly Ala Pro Pro Glu Gly		
1170	1175	1180
Pro Gln Pro Arg Pro Pro Thr Ala Val Asp Pro Asn Ala Glu Pro Thr		
1185	1190	1195 1200
Leu Leu Arg His Pro Gln Gly Thr Val Val Phe Thr Thr Gln Val Pro		
	1205	1210 1215
Thr Leu Gly Arg Tyr Ala Phe Leu Leu His Gly Tyr Gln Pro Val His		
	1220	1225 1230
Pro Ser Phe Pro Val Glu Val Leu Ile Asn Gly Gly Arg Ile Trp Gln		
	1235	1240 1245
Gly His Ala Asn Ala Ser Phe Cys Pro His Gly Tyr Gly Cys Arg Thr		
	1250	1255 1260
Leu Val Leu Cys Glu Gly Gln Thr Met Leu Asp Val Thr Asp Asn Glu		
	1265	1270 1275 1280
Leu Thr Val Thr Val Arg Val Pro Glu Gly Arg Trp Leu Trp Leu Asp		
	1285	1290 1295
Tyr Val Leu Ile Val Pro Glu Asp Ala Tyr Ser Ser Ser Tyr Leu Gln		
	1300	1305 1310
Glu Glu Pro Leu Asp Lys Ser Tyr Asp Phe Ile Ser His Cys Ala Thr		
	1315	1320 1325
Gln Gly Tyr His Ile Ser Pro Ser Ser Ser Ser Pro Phe Cys Arg Asn		
	1330	1335 1340
Ala Ala Thr Ser Leu Ser Leu Phe Tyr Asn Asn Gly Ala Leu Pro Cys		
	1345	1350 1355 1360
Gly Cys His Glu Val Gly Ala Val Ser Pro Thr Cys Glu Pro Phe Gly		
	1365	1370 1375
Gly Gln Cys Pro Cys Arg Gly His Val Ile Gly Arg Asp Cys Ser Arg		
	1380	1385 1390
Cys Ala Thr Gly Tyr Trp Gly Phe Pro Asn Cys Arg Pro Cys Asp Cys		
	1395	1400 1405
Gly Ala Arg Leu Cys Asp Glu Leu Thr Gly Gln Cys Ile Cys Pro Pro		
	1410	1415 1420
Arg Thr Val Pro Pro Asp Cys Leu Val Cys Gln Pro Gln Ser Phe Gly		
	1425	1430 1435 1440
Cys His Pro Leu Val Gly Cys Glu Glu Cys Asn Cys Ser Gly Pro Gly		
	1445	1450 1455
Val Gln Glu Leu Thr Asp Pro Thr Cys Asp Met Asp Ser Gly Gln Cys		

1460					1465					1470						
Arg	Cys	Arg	Pro	Asn	Val	Ala	Gly	Arg	Arg	Cys	Asp	Thr	Cys	Ala	Pro	
1475					1480					1485						
Gly	Phe	Tyr	Gly	Tyr	Pro	Ser	Cys	Arg	Pro	Cys	Asp	Cys	His	Glu	Ala	
1490					1495					1500						
Gly	Thr	Met	Ala	Ser	Val	Cys	Asp	Pro	Leu	Thr	Gly	Gln	Cys	His	Cys	
1505					1510					1515					1520	
Lys	Glu	Asn	Val	Gln	Gly	Ser	Arg	Cys	Asp	Gln	Cys	Arg	Val	Gly	Thr	
1525					1530					1535						
Phe	Ser	Leu	Asp	Ala	Ala	Asn	Pro	Lys	Gly	Cys	Thr	Arg	Cys	Phe	Cys	
1540					1545					1550						
Phe	Gly	Ala	Thr	Glu	Arg	Cys	Gly	Asn	Ser	Asn	Leu	Ala	Arg	His	Glu	
1555					1560					1565						
Phe	Val	Asp	Met	Glu	Gly	Trp	Val	Leu	Leu	Ser	Ser	Asp	Arg	Gln	Val	
1570					1575					1580						
Val	Pro	His	Glu	His	Arg	Pro	Glu	Ile	Glu	Leu	Leu	His	Ala	Asp	Leu	
1585					1590					1595					1600	
Arg	Ser	Val	Ala	Asp	Thr	Phe	Ser	Glu	Leu	Tyr	Trp	Gln	Ala	Pro	Pro	
1605					1610					1615						
Ser	Tyr	Leu	Gly	Asp	Arg	Val	Ser	Ser	Tyr	Gly	Gly	Thr	Leu	His	Tyr	
1620					1625					1630						
Glu	Leu	His	Ser	Glu	Thr	Gln	Arg	Gly	Asp	Ile	Phe	Ile	Pro	Tyr	Glu	
1635					1640					1645						
Ser	Arg	Pro	Asp	Val	Val	Leu	Gln	Gly	Asn	Gln	Met	Ser	Ile	Ala	Phe	
1650					1655					1660						
Leu	Glu	Leu	Ala	Tyr	Pro	Pro	Pro	Gly	Gln	Val	His	Arg	Gly	Gln	Leu	
1665					1670					1675					1680	
Gln	Leu	Val	Glu	Gly	Asn	Phe	Arg	His	Leu	Glu	Thr	His	Asn	Pro	Val	
1685					1690					1695						
Ser	Arg	Glu	Glu	Leu	Met	Met	Val	Leu	Ala	Gly	Leu	Glu	Gln	Leu	Gln	
1700					1705					1710						
Ile	Arg	Ala	Leu	Phe	Ser	Gln	Thr	Ser	Ser	Ser	Val	Ser	Leu	Arg	Arg	
1715					1720					1725						
Val	Val	Leu	Glu	Val	Ala	Ser	Glu	Ala	Gly	Arg	Gly	Pro	Pro	Ala	Ser	
1730					1735					1740						
Asn	Val	Glu	Leu	Cys	Met	Cys	Pro	Ala	Asn	Tyr	Arg	Gly	Asp	Ser	Cys	
1745					1750					1755					1760	
Gln	Glu	Cys	Ala	Pro	Gly	Tyr	Tyr	Arg	Asp	Thr	Lys	Gly	Leu	Phe	Leu	

1765	1770	1775
Gly Arg Cys Val Pro Cys Gln Cys His Gly His Ser Asp Arg Cys Leu		
1780	1785	1790
Pro Gly Ser Gly Ile Cys Val Gly Cys Gln His Asn Thr Glu Gly Asp		
1795	1800	1805
Gln Cys Glu Arg Cys Arg Pro Gly Phe Val Ser Ser Asp Pro Ser Asn		
1810	1815	1820
Pro Ala Ser Pro Cys Val Ser Cys Pro Cys Pro Leu Ala Val Pro Ser		
1825	1830	1835
Asn Asn Phe Ala Asp Gly Cys Val Leu Arg Asn Gly Arg Thr Gln Cys		
1845	1850	1855
Leu Cys Arg Pro Gly Tyr Ala Gly Ala Ser Cys Glu Arg Cys Ala Pro		
1860	1865	1870
Gly Phe Phe Gly Asn Pro Leu Val Leu Gly Ser Ser Cys Gln Pro Cys		
1875	1880	1885
Asp Cys Ser Gly Asn Gly Asp Pro Asn Met Ile Phe Ser Asp Cys Asp		
1890	1895	1900
Pro Leu Thr Gly Ala Cys Arg Gly Cys Leu Arg His Thr Thr Gly Pro		
1905	1910	1915
His Cys Glu Arg Cys Ala Pro Gly Phe Tyr Gly Asn Ala Leu Leu Pro		
1925	1930	1935
Gly Asn Cys Thr Arg Cys Asp Cys Ser Pro Cys Gly Thr Glu Thr Cys		
1940	1945	1950
Asp Pro Gln Ser Gly Arg Cys Leu Cys Lys Ala Gly Val Thr Gly Gln		
1955	1960	1965
Arg Cys Asp Arg Cys Leu Glu Gly Tyr Phe Gly Phe Glu Gln Cys Gln		
1970	1975	1980
Gly Cys Arg Pro Cys Ala Cys Gly Pro Ala Ala Lys Gly Ser Glu Cys		
1985	1990	1995
His Pro Gln Ser Gly Gln Cys His Cys Gln Pro Gly Thr Thr Gly Pro		
2005	2010	2015
Gln Cys Leu Glu Cys Ala Pro Gly Tyr Trp Gly Leu Pro Glu Lys Gly		
2020	2025	2030
Cys Arg Arg Cys Gln Cys Pro Arg Gly His Cys Asp Pro His Thr Gly		
2035	2040	2045
His Cys Thr Cys Pro Pro Gly Leu Ser Gly Glu Arg Cys Asp Thr Cys		
2050	2055	2060
Ser Gln Gln His Gln Val Pro Val Pro Gly Lys Pro Gly Gly His Gly		

2065	2070	2075	2080
Ile His Cys Glu Val Cys Asp His Cys Val Val Leu Leu Leu Asp Asp			
2085	2090	2095	
Leu Glu Arg Ala Gly Ala Leu Leu Pro Ala Ile Arg Glu Gln Leu Gln			
2100	2105	2110	
Gly Ile Asn Ala Ser Ser Ala Ala Trp Ala Arg Leu His Arg Leu Asn			
2115	2120	2125	
Ala Ser Ile Ala Asp Leu Gln Ser Lys Leu Arg Arg Pro Pro Gly Pro			
2130	2135	2140	
Arg Tyr Gln Ala Ala Gln Gln Leu Gln Thr Leu Glu Gln Gln Ser Ile			
2145	2150	2155	2160
Ser Leu Gln Gln Asp Thr Glu Arg Leu Gly Ser Gln Ala Thr Gly Val			
2165	2170	2175	
Gln Gly Gln Ala Gly Gln Leu Leu Asp Thr Thr Glu Ser Thr Leu Gly			
2180	2185	2190	
Arg Ala Gln Lys Leu Leu Glu Ser Val Arg Ala Val Gly Arg Ala Leu			
2195	2200	2205	
Asn Glu Leu Ala Ser Arg Met Gly Gln Gly Ser Pro Gly Asp Ala Leu			
2210	2215	2220	
Val Pro Ser Gly Glu Gln Leu Arg Trp Ala Leu Ala Glu Val Glu Arg			
2225	2230	2235	2240
Leu Leu Trp Asp Met Arg Thr Arg Asp Leu Gly Ala Gln Gly Ala Val			
2245	2250	2255	
Ala Glu Ala Glu Leu Ala Glu Ala Gln Arg Leu Met Ala Arg Val Gln			
2260	2265	2270	
Glu Gln Leu Thr Ser Phe Trp Glu Glu Asn Gln Ser Leu Ala Thr His			
2275	2280	2285	
Ile Arg Asp Gln Leu Ala Gln Tyr Glu Ser Gly Leu Met Asp Leu Arg			
2290	2295	2300	
Glu Ala Leu Asn Gln Ala Val Asn Thr Thr Arg Glu Ala Glu Glu Leu			
2305	2310	2315	2320
Asn Ser Arg Asn Gln Glu Arg Val Lys Glu Ala Leu Gln Trp Lys Gln			
2325	2330	2335	
Glu Leu Ser Gln Asp Asn Ala Thr Leu Lys Ala Thr Leu Gln Ala Ala			
2340	2345	2350	
Ser Leu Ile Leu Gly His Val Ser Glu Leu Leu Gln Gly Ile Asp Gln			
2355	2360	2365	
Ala Lys Glu Asp Leu Glu His Leu Ala Ala Ser Leu Asp Gly Ala Trp			

2370	2375	2380
Thr Pro Leu Leu Lys Arg Met Gln Ala Phe Ser Pro Ala Ser Ser Lys		
2385	2390	2395 2400
Val Asp Leu Val Glu Ala Ala Glu Ala His Ala Gln Lys Leu Asn Gln		
	2405	2410 2415
Leu Ala Ile Asn Leu Ser Gly Ile Ile Leu Gly Ile Asn Gln Asp Arg		
	2420	2425 2430
Phe Ile Gln Arg Ala Val Glu Ala Ser Asn Ala Tyr Ser Ser Ile Leu		
	2435	2440 2445
Gln Ala Val Gln Ala Ala Glu Asp Ala Ala Gly Gln Ala Leu Arg Gln		
	2450	2455 2460
Ala Ser Arg Thr Trp Glu Met Val Val Gln Arg Gly Leu Ala Ala Gly		
2465	2470	2475 2480
Ala Arg Gln Leu Leu Ala Asn Ser Ser Ala Leu Glu Glu Thr Ile Leu		
	2485	2490 2495
Gly His Gln Gly Arg Leu Gly Leu Ala Gln Gly Arg Leu Gln Ala Ala		
	2500	2505 2510
Gly Ile Gln Leu His Asn Val Trp Ala Arg Lys Asn Gln Leu Ala Ala		
	2515	2520 2525
Gln Ile Gln Glu Ala Gln Ala Met Leu Ala Met Asp Thr Ser Glu Thr		
2530	2535	2540
Ser Glu Lys Ile Ala His Ala Lys Ala Val Ala Ala Glu Ala Leu Ser		
2545	2550	2555 2560
Thr Ala Thr His Val Gln Ser Gln Leu Gln Gly Met Gln Lys Asn Val		
	2565	2570 2575
Glu Arg Trp Gln Ser Gln Leu Gly Gly Leu Gln Gly Gln Asp Leu Ser		
	2580	2585 2590
Gln Val Glu Arg Asp Ala Ser Ser Ser Val Ser Thr Leu Glu Lys Thr		
	2595	2600 2605
Leu Pro Gln Leu Leu Ala Lys Leu Ser Arg Leu Glu Asn Arg Gly Val		
	2610	2615 2620
His Asn Ala Ser Leu Ala Leu Ser Ala Asn Ile Gly Arg Val Arg Lys		
2625	2630	2635 2640
Leu Ile Ala Gln Ala Arg Ser Ala Ala Ser Lys Val Lys Val Ser Met		
	2645	2650 2655
Lys Phe Asn Gly Arg Ser Gly Val Arg Leu Arg Pro Pro Arg Asp Leu		
	2660	2665 2670
Ala Asp Leu Ala Ala Tyr Thr Ala Leu Lys Phe His Ile Gln Ser Pro		

2675	2680	2685
Val Pro Ala Pro Glu Pro Gly Lys Asn Thr Gly Asp His Phe Val Leu 2690	2695	2700
Tyr Met Gly Ser Arg Gln Ala Thr Gly Asp Tyr Met Gly Val Ser Leu 2705	2710	2715 2720
Arg Asn Gln Lys Val His Trp Val Tyr Arg Leu Gly Lys Ala Gly Pro 2725	2730	2735
Thr Thr Leu Ser Ile Asp Glu Asn Ile Gly Glu Gln Phe Ala Ala Val 2740	2745	2750
Ser Ile Asp Arg Thr Leu Gln Phe Gly His Met Ser Val Thr Val Glu 2755	2760	2765
Lys Gln Met Val His Glu Ile Lys Gly Asp Thr Val Ala Pro Gly Ser 2770	2775	2780
Glu Gly Leu Leu Asn Leu His Pro Asp Asp Phe Val Phe Tyr Val Gly 2785	2790	2795 2800
Gly Tyr Pro Ser Asn Phe Thr Pro Pro Glu Pro Leu Arg Phe Pro Gly 2805	2810	2815
Tyr Leu Gly Cys Ile Glu Met Glu Thr Leu Asn Glu Glu Val Val Ser 2820	2825	2830
Leu Tyr Asn Phe Glu Gln Thr Phe Met Leu Asp Thr Ala Val Asp Lys 2835	2840	2845
Pro Cys Ala Arg Ser Lys Ala Thr Gly Asp Pro Trp Leu Thr Asp Gly 2850	2855	2860
Ser Tyr Leu Asp Gly Ser Gly Phe Ala Arg Ile Ser Phe Glu Lys Gln 2865	2870	2875 2880
Phe Ser Asn Thr Lys Arg Phe Asp Gln Glu Leu Arg Leu Val Ser Tyr 2885	2890	2895
Asn Gly Ile Ile Phe Phe Leu Lys Gln Glu Ser Gln Phe Leu Cys Leu 2900	2905	2910
Ala Val Gln Glu Gly Thr Leu Val Leu Phe Tyr Asp Phe Gly Ser Gly 2915	2920	2925
Leu Lys Lys Ala Asp Pro Leu Gln Pro Pro Gln Ala Leu Thr Ala Ala 2930	2935	2940
Ser Lys Ala Ile Gln Val Phe Leu Leu Ala Gly Asn Arg Lys Arg Val 2945	2950	2955 2960
Leu Val Arg Val Glu Arg Ala Thr Val Phe Ser Val Asp Gln Asp Asn 2965	2970	2975
Met Leu Glu Met Ala Asp Ala Tyr Tyr Leu Gly Gly Val Pro Pro Glu		

2980	2985	2990
Gln Leu Pro Leu Ser Leu Arg Gln Leu Phe Pro Ser Gly Gly Ser Val 2995 3000 3005		
Arg Gly Cys Ile Lys Gly Ile Lys Ala Leu Gly Lys Tyr Val Asp Leu 3010 3015 3020		
Lys Arg Leu Asn Thr Thr Gly Ile Ser Phe Gly Cys Thr Ala Asp Leu 3025 3030 3035 3040		
Leu Val Gly Arg Thr Met Thr Phe His Gly His Gly Phe Leu Pro Leu 3045 3050 3055		
Ala Leu Pro Asp Val Ala Pro Ile Thr Glu Val Val Tyr Ser Gly Phe 3060 3065 3070		
Gly Phe Arg Gly Thr Gln Asp Asn Asn Leu Leu Tyr Tyr Arg Thr Ser 3075 3080 3085		
Pro Asp Gly Pro Tyr Gln Val Ser Leu Arg Glu Gly His Val Thr Leu 3090 3095 3100		
Arg Phe Met Asn Gln Glu Val Glu Thr Gln Arg Val Phe Ala Asp Gly 3105 3110 3115 3120		
Ala Pro His Tyr Val Ala Phe Tyr Ser Asn Val Thr Gly Val Trp Leu 3125 3130 3135		
Tyr Val Asp Asp Gln Leu Gln Leu Val Lys Ser His Glu Arg Thr Thr 3140 3145 3150		
Pro Met Leu Gln Leu Gln Pro Glu Glu Pro Ser Arg Leu Leu Leu Gly 3155 3160 3165		
Gly Leu Pro Val Ser Gly Thr Phe His Asn Phe Ser Gly Cys Ile Ser 3170 3175 3180		
Asn Val Phe Val Gln Arg Leu Arg Gly Pro Gln Arg Val Phe Asp Leu 3185 3190 3195 3200		
His Gln Asn Met Gly Ser Val Asn Val Ser Val Gly Cys Thr Pro Ala 3205 3210 3215		
Gln Leu Ile Glu Thr Ser Arg Ala Thr Ala Gln Lys Val Ser Arg Arg 3220 3225 3230		
Ser Arg Gln Pro Ser Gln Asp Leu Ala Cys Thr Thr Pro Trp Leu Pro 3235 3240 3245		
Gly Thr Ile Gln Asp Ala Tyr Gln Phe Gly Gly Pro Leu Pro Ser Tyr 3250 3255 3260		
Leu Gln Phe Val Gly Ile Ser Pro Ser His Arg Asn Arg Leu His Leu 3265 3270 3275 3280		
Ser Met Leu Val Arg Pro His Ala Ala Ser Gln Gly Leu Leu Leu Ser		

3285	3290	3295
Thr Ala Pro Met Ser Gly Arg Ser Pro Ser Leu Val Leu Phe Leu Asn 3300 3305 3310		
His Gly His Phe Val Ala Gln Thr Glu Gly Pro Gly Pro Arg Leu Gln 3315 3320 3325		
Val Gln Ser Arg Gln His Ser Arg Ala Gly Gln Trp His Arg Val Ser 3330 3335 3340		
Val Arg Trp Gly Met Gln Gln Ile Gln Leu Val Val Asp Gly Ser Gln 3345 3350 3355 3360		
Thr Trp Ser Gln Lys Ala Leu His His Arg Val Pro Arg Ala Glu Arg 3365 3370 3375		
Pro Gln Pro Tyr Thr Leu Ser Val Gly Gly Leu Pro Ala Ser Ser Tyr 3380 3385 3390		
Ser Ser Lys Leu Pro Val Ser Val Gly Phe Ser Gly Cys Leu Lys Lys 3395 3400 3405		
Leu Gln Leu Asp Lys Gln Pro Leu Arg Thr Pro Thr Gln Met Val Gly 3410 3415 3420		
Val Thr Pro Cys Val Ser Gly Pro Leu Glu Asp Gly Leu Phe Phe Pro 3425 3430 3435 3440		
Gly Ser Glu Gly Val Val Thr Leu Glu Leu Pro Lys Ala Lys Met Pro 3445 3450 3455		
Tyr Val Ser Leu Glu Leu Glu Met Arg Pro Leu Ala Ala Ala Gly Leu 3460 3465 3470		
Ile Phe His Leu Gly Gln Ala Leu Ala Thr Pro Tyr Met Gln Leu Lys 3475 3480 3485		
Val Leu Thr Glu Gln Val Leu Leu Gln Ala Asn Asp Gly Ala Gly Glu 3490 3495 3500		
Phe Ser Thr Trp Val Thr Tyr Pro Lys Leu Cys Asp Gly Arg Trp His 3505 3510 3515 3520		
Arg Val Ala Val Ile Met Gly Arg Asp Thr Leu Arg Leu Glu Val Asp 3525 3530 3535		
Thr Gln Ser Asn His Thr Thr Gly Arg Leu Pro Glu Ser Leu Ala Gly 3540 3545 3550		
Ser Pro Ala Leu Leu His Leu Gly Ser Leu Pro Lys Ser Ser Thr Ala 3555 3560 3565		
Arg Pro Glu Leu Pro Ala Tyr Arg Gly Cys Leu Arg Lys Leu Leu Ile 3570 3575 3580		
Asn Gly Ala Pro Val Asn Val Thr Ala Ser Val Gln Ile Gln Gly Ala		

Asn Glu Arg Pro Ser Ser Thr Asn Tyr Phe Asn Ser Thr Val Leu Gln
 210 215 220
 Glu Trp Thr Arg Ala Thr Asn Val Arg Ile Arg Leu Leu Arg Thr Lys
 225 230 235 240
 Asn Leu Leu Gly His Leu Met Ser Val Ala Arg Gln Asp Pro Thr Val
 245 250 255
 Thr Arg Arg Tyr Phe Tyr Ser Ile Lys Asp Ile Ser Ile Gly Gly Arg
 260 265 270
 Cys Met Cys Asn Gly His Ala Asp Thr Cys Asp Val Lys Asp Pro Lys
 275 280 285
 Ser Pro Val Arg Ile Leu Ala Cys Arg Cys Gln His His Thr Cys Gly
 290 295 300
 Ile Gln Cys Asn Glu Cys Cys Pro Gly Phe Glu Gln Lys Lys Trp Arg
 305 310 315 320
 Gln Asn Thr Asn Ala Arg Pro Phe Asn Cys Glu Pro Cys Asn Cys His
 325 330 335
 Gly His Ser Asn Glu Cys Lys Tyr Asp Glu Glu Val Asn Arg Lys Gly
 340 345 350
 Leu Ser Leu Asp Ile His Gly His Tyr Asp Gly Gly Gly Val Cys Gln
 355 360 365
 Asn Cys Gln His Asn Thr Val Gly Ile Asn Cys Asn Lys Cys Lys Pro
 370 375 380
 Lys Tyr Tyr Arg Pro Lys Gly Lys His Trp Asn Glu Thr Asp Val Cys
 385 390 395 400
 Ser Pro Cys Gln Cys Asp Tyr Phe Phe Ser Thr Gly His Cys Glu Glu
 405 410 415
 Glu Thr Gly Asn Cys Glu Cys Arg Ala Ala Phe Gln Pro Pro Ser Cys
 420 425 430
 Asp Ser Cys Ala Tyr Gly Tyr Tyr Gly Tyr Pro Asn Cys Arg Glu Cys
 435 440 445
 Glu Cys Asn Leu Asn Gly Thr Asn Gly Tyr His Cys Glu Ala Glu Ser
 450 455 460
 Gly Gln Gln Cys Pro Cys Lys Ile Asn Phe Ala Gly Ala Tyr Cys Lys
 465 470 475 480
 Gln Cys Ala Glu Gly Tyr Tyr Gly Phe Pro Glu Cys Lys Ala Cys Glu
 485 490 495
 Cys Asn Lys Ile Gly Ser Ile Thr Asn Asp Cys Asn Val Thr Thr Gly
 500 505 510

Glu Cys Lys Cys Leu Thr Asn Phe Gly Gly Asp Asn Cys Glu Arg Cys
 515 520 525
 Lys His Gly Tyr Phe Asn Tyr Pro Thr Cys Ser Tyr Cys Asp Cys Asp
 530 535 540
 Asn Gln Gly Thr Glu Ser Glu Ile Cys Asn Lys Gln Ser Gly Gln Cys
 545 550 555 560
 Ile Cys Arg Glu Gly Phe Gly Gly Pro Arg Cys Asp Gln Cys Leu Pro
 565 570 575
 Gly Phe Tyr Asn Tyr Pro Asp Cys Lys Pro Cys Asn Cys Ser Ser Thr
 580 585 590
 Gly Ser Ser Ala Ile Thr Cys Asp Asn Thr Gly Lys Cys Asn Cys Leu
 595 600 605
 Asn Asn Phe Ala Gly Lys Gln Cys Thr Leu Cys Thr Ala Gly Tyr Tyr
 610 615 620
 Ser Tyr Pro Asp Cys Leu Pro Cys His Cys Asp Ser His Gly Ser Gln
 625 630 635 640
 Gly Val Ser Cys Asn Ser Asp Gly Gln Cys Leu Cys Gln Pro Asn Phe
 645 650 655
 Asp Gly Arg Gln Cys Asp Ser Cys Lys Glu Gly Phe Tyr Asn Phe Pro
 660 665 670
 Ser Cys Glu Asp Cys Asn Cys Asp Pro Ala Gly Val Ile Asp Lys Phe
 675 680 685
 Ala Gly Cys Gly Ser Val Pro Val Gly Glu Leu Cys Lys Cys Lys Glu
 690 695 700
 Arg Val Thr Gly Arg Ile Cys Asn Glu Cys Lys Pro Leu Tyr Trp Asn
 705 710 715 720
 Leu Asn Ile Ser Asn Thr Glu Gly Cys Glu Ile Cys Asp Cys Trp Thr
 725 730 735
 Asp Gly Thr Ile Ser Ala Leu Asp Thr Cys Thr Ser Lys Ser Gly Gln
 740 745 750
 Cys Pro Cys Lys Pro His Thr Gln Gly Arg Arg Cys Gln Glu Cys Arg
 755 760 765
 Asp Gly Thr Phe Asp Leu Asp Ser Ala Ser Leu Phe Gly Cys Lys Asp
 770 775 780
 Cys Ser Cys Asp Val Gly Gly Ser Trp Gln Ser Val Cys Asp Lys Ile
 785 790 795 800
 Ser Gly Gln Cys Lys Cys His Pro Arg Ile Thr Gly Leu Ala Cys Thr
 805 810 815

Gln Pro Leu Thr Thr His Phe Phe Pro Thr Leu His Gln Phe Gln Tyr
 820 825 830
 Glu Tyr Glu Asp Gly Ser Leu Pro Ser Gly Thr Gln Val Arg Tyr Asp
 835 840 845
 Tyr Asp Glu Ala Ala Phe Pro Gly Phe Ser Ser Lys Gly Tyr Val Val
 850 855 860
 Phe Asn Ala Ile Gln Asn Asp Val Arg Asn Glu Val Asn Val Phe Lys
 865 870 875 880
 Ser Ser Leu Tyr Arg Ile Val Leu Arg Tyr Val Asn Pro Asn Ala Glu
 885 890 895
 Asn Val Thr Ala Thr Ile Ser Val Thr Ser Asp Asn Pro Leu Glu Val
 900 905 910
 Asp Gln His Val Lys Val Leu Leu Gln Pro Thr Ser Glu Pro Gln Phe
 915 920 925
 Val Thr Val Ala Gly Pro Leu Gly Val Lys Pro Ser Ala Ile Val Leu
 930 935 940
 Asp Pro Gly Arg Tyr Val Phe Thr Thr Lys Ala Asn Lys Asn Val Met
 945 950 955 960
 Leu Asp Tyr Phe Val Leu Leu Pro Ala Ala Tyr Tyr Glu Ala Gly Ile
 965 970 975
 Leu Thr Arg His Ile Ser Asn Pro Cys Glu Leu Gly Asn Met Glu Leu
 980 985 990
 Cys Arg His Tyr Lys Tyr Ala Ser Val Glu Val Phe Ser Pro Ala Ala
 995 1000 1005
 Thr Pro Phe Val Ile Gly Glu Asn Ser Lys Pro Thr Asn Pro Val Glu
 1010 1015 1020
 Thr Tyr Thr Asp Pro Glu His Leu Gln Ile Val Ser His Val Gly Asp
 1025 1030 1035 1040
 Ile Pro Val Leu Ser Gly Ser Gln Asn Glu Leu His Tyr Ile Val Asp
 1045 1050 1055
 Val Pro Arg Ser Gly Arg Tyr Ile Phe Val Ile Asp Tyr Ile Ser Asp
 1060 1065 1070
 Arg Asn Phe Pro Asp Ser Tyr Tyr Ile Asn Leu Lys Leu Lys Asp Asn
 1075 1080 1085
 Pro Asp Ser Glu Thr Ser Val Leu Leu Tyr Pro Cys Leu Tyr Ser Thr
 1090 1095 1100
 Ile Cys Arg Thr Ser Val Asn Glu Asp Gly Met Glu Lys Ser Phe Tyr
 1105 1110 1115 1120

Ile Asn Lys Glu Asp Leu Gln Pro Val Ile Ile Ser Ala Asp Ile Glu
 1125 1130 1135
 Asp Gly Ser Arg Phe Pro Ile Ile Ser Val Thr Ala Ile Pro Val Asp
 1140 1145 1150
 Gln Trp Ser Ile Asp Tyr Ile Asn Pro Ser Pro Val Cys Val Ile His
 1155 1160 1165
 Asp Gln Gln Cys Ala Thr Pro Lys Phe Arg Ser Val Pro Asp Ser Lys
 1170 1175 1180
 Lys Ile Glu Phe Glu Thr Asp His Glu Asp Arg Ile Ala Thr Asn Lys
 1185 1190 1195 1200
 Pro Pro Tyr Ala Ser Leu Asp Glu Arg Val Lys Leu Val His Leu Asp
 1205 1210 1215
 Ser Gln Asn Glu Ala Thr Ile Val Ile Glu Ser Lys Val Asp Ala Thr
 1220 1225 1230
 Lys Pro Asn Leu Phe Val Ile Leu Val Lys Tyr Tyr Gln Pro Ser His
 1235 1240 1245
 Pro Lys Tyr Gln Val Tyr Tyr Thr Leu Thr Ala Gly Lys Asn Gln Tyr
 1250 1255 1260
 Asp Gly Lys Phe Asp Ile Gln His Cys Pro Ser Ser Ser Gly Cys Arg
 1265 1270 1275 1280
 Gly Val Ile Arg Pro Ala Gly Glu Gly Ser Phe Glu Ile Asp Asp Glu
 1285 1290 1295
 Phe Lys Phe Thr Ile Thr Thr Asp Arg Ser Gln Ser Val Trp Leu Asp
 1300 1305 1310
 Tyr Leu Val Val Val Pro Leu Lys Gln Tyr Asn Asp Asp Leu Leu Val
 1315 1320 1325
 Glu Glu Thr Phe Asp Gln Thr Lys Glu Phe Ile Gln Asn Cys Gly His
 1330 1335 1340
 Asp His Phe His Ile Thr His Asn Ala Ser Asp Phe Cys Lys Lys Ser
 1345 1350 1355 1360
 Val Phe Ser Leu Thr Ala Asp Tyr Asn Ser Gly Ala Leu Pro Cys Asn
 1365 1370 1375
 Cys Asp Tyr Ala Gly Ser Thr Ser Phe Glu Cys His Pro Phe Gly Gly
 1380 1385 1390
 Gln Cys Gln Cys Lys Pro Asn Val Ile Glu Arg Thr Cys Gly Arg Cys
 1395 1400 1405
 Arg Ser Arg Tyr Tyr Gly Phe Pro Asp Cys Lys Pro Cys Lys Cys Pro
 1410 1415 1420

Asn Ser Ala Met Cys Glu Pro Thr Thr Gly Glu Cys Met Cys Pro Pro
 1425 1430 1435 1440
 Asn Val Ile Gly Asp Leu Cys Glu Lys Cys Ala Pro Asn Thr Tyr Gly
 1445 1450 1455
 Phe His Gln Val Ile Gly Cys Glu Glu Cys Ala Cys Asn Pro Met Gly
 1460 1465 1470
 Ile Ala Asn Gly Asn Ser Gln Cys Asp Leu Phe Asn Gly Thr Cys Glu
 1475 1480 1485
 Cys Arg Gln Asn Ile Glu Gly Arg Ala Cys Asp Val Cys Ser Asn Gly
 1490 1495 1500
 Tyr Phe Asn Phe Pro His Cys Glu Gln Cys Ser Cys His Lys Pro Gly
 1505 1510 1515 1520
 Thr Glu Leu Glu Val Cys Asp Lys Ile Asp Gly Ala Cys Phe Cys Lys
 1525 1530 1535
 Lys Asn Val Val Gly Arg Asp Cys Asp Gln Cys Val Asp Gly Thr Tyr
 1540 1545 1550
 Asn Leu Gln Glu Ser Asn Pro Asp Gly Cys Thr Thr Cys Phe Cys Phe
 1555 1560 1565
 Gly Lys Thr Ser Arg Cys Asp Ser Ala Tyr Leu Arg Val Tyr Asn Val
 1570 1575 1580
 Ser Leu Leu Lys His Val Ser Ile Thr Thr Pro Glu Phe His Glu Glu
 1585 1590 1595 1600
 Ser Ile Lys Phe Asp Met Trp Pro Val Pro Ala Asp Glu Ile Leu Leu
 1605 1610 1615
 Asn Glu Thr Thr Leu Lys Ala Asp Phe Thr Leu Arg Glu Val Asn Asp
 1620 1625 1630
 Glu Arg Pro Ala Tyr Phe Gly Val Leu Asp Tyr Leu Leu Asn Gln Asn
 1635 1640 1645
 Asn His Ile Ser Ala Tyr Gly Gly Asp Leu Ala Tyr Thr Leu His Phe
 1650 1655 1660
 Thr Ser Gly Phe Asp Gly Lys Tyr Ile Val Ala Pro Asp Val Ile Leu
 1665 1670 1675 1680
 Phe Ser Glu His Asn Ala Leu Val His Thr Ser Tyr Glu Gln Pro Ser
 1685 1690 1695
 Arg Asn Glu Pro Phe Thr Asn Arg Val Asn Ile Val Glu Ser Asn Phe
 1700 1705 1710
 Gln Thr Ile Ser Gly Lys Pro Val Ser Arg Ala Asp Phe Met Met Val
 1715 1720 1725

Leu Arg Asp Leu Lys Val Ile Phe Ile Arg Ala Asn Tyr Trp Glu Gln
 1730 1735 1740
 Thr Leu Val Thr His Leu Ser Asp Val Tyr Leu Thr Leu Ala Asp Glu
 1745 1750 1755 1760
 Asp Ala Asp Gly Thr Gly Glu Tyr Gln Phe Leu Ala Val Glu Arg Cys
 1765 1770 1775
 Ser Cys Pro Pro Gly Tyr Ser Gly His Ser Cys Glu Asp Cys Ala Pro
 1780 1785 1790
 Gly Tyr Tyr Arg Asp Pro Ser Gly Pro Tyr Gly Gly Tyr Cys Ile Pro
 1795 1800 1805
 Cys Glu Cys Asn Gly His Ser Glu Thr Cys Asp Cys Ala Thr Gly Ile
 1810 1815 1820
 Cys Ser Lys Cys Gln His Gly Thr Glu Gly Asp His Cys Glu Arg Cys
 1825 1830 1835 1840
 Val Ser Gly Tyr Tyr Gly Asn Ala Thr Asn Gly Thr Pro Gly Asp Cys
 1845 1850 1855
 Met Ile Cys Ala Cys Pro Leu Pro Phe Asp Ser Asn Asn Phe Ala Thr
 1860 1865 1870
 Ser Cys Glu Ile Ser Glu Ser Gly Asp Gln Ile His Cys Glu Cys Lys
 1875 1880 1885
 Pro Gly Tyr Thr Gly Pro Arg Cys Glu Ser Cys Ala Asn Gly Phe Tyr
 1890 1895 1900
 Gly Glu Pro Glu Ser Ile Gly Gln Val Cys Lys Pro Cys Glu Cys Ser
 1905 1910 1915 1920
 Gly Asn Ile Asn Pro Glu Asp Gln Gly Ser Cys Asp Thr Arg Thr Gly
 1925 1930 1935
 Glu Cys Leu Arg Cys Leu Asn Asn Thr Phe Gly Ala Ala Cys Asn Leu
 1940 1945 1950
 Cys Ala Pro Gly Phe Tyr Gly Asp Ala Ile Lys Leu Lys Asn Cys Gln
 1955 1960 1965
 Ser Cys Asp Cys Asp Asp Leu Gly Thr Gln Thr Cys Asp Pro Phe Val
 1970 1975 1980
 Gly Val Cys Thr Cys His Glu Asn Val Ile Gly Asp Arg Cys Asp Arg
 1985 1990 1995 2000
 Cys Lys Pro Asp His Tyr Gly Phe Glu Ser Gly Val Gly Cys Arg Ala
 2005 2010 2015
 Cys Asp Cys Gly Ala Ala Ser Asn Ser Thr Gln Cys Asp Pro His Thr
 2020 2025 2030

Gly His Cys Ala Cys Lys Ser Gly Val Thr Gly Arg Gln Cys Asp Arg
 2035 2040 2045
 Cys Ala Val Asp His Trp Lys Tyr Glu Lys Asp Gly Cys Thr Pro Cys
 2050 2055 2060
 Asn Cys Asn Gln Gly Tyr Ser Arg Gly Phe Gly Cys Asn Pro Asn Thr
 2065 2070 2075 2080
 Gly Lys Cys Gln Cys Leu Pro Gly Val Ile Gly Asp Arg Cys Asp Ala
 2085 2090 2095
 Cys Pro Asn Arg Trp Val Leu Ile Lys Asp Glu Gly Cys Gln Glu Cys
 2100 2105 2110
 Asn Asn Cys His His Ala Leu Leu Asp Val Thr Asp Arg Met Arg Tyr
 2115 2120 2125
 Gln Ile Asp Ser Val Leu Glu Asp Phe Asn Ser Val Thr Leu Ala Phe
 2130 2135 2140
 Phe Thr Ser Gln Lys Leu Asn Tyr Tyr Asp Gln Leu Ala Asp Glu Leu
 2145 2150 2155 2160
 Glu Pro Lys Val Lys Leu Leu Asp Pro Asn Ser Val Asp Leu Ser Pro
 2165 2170 2175
 Ser Lys Lys Ala Asn Ser Glu Leu Glu Ser Asp Ala Lys Ser Tyr Ala
 2180 2185 2190
 Lys Gln Val Asn Gln Thr Leu Ala Asn Ala Phe Asp Ile Arg Glu Arg
 2195 2200 2205
 Ser Ser Thr Thr Leu Gly Asn Ile Thr Val Ala Tyr Asp Glu Ala Val
 2210 2215 2220
 Lys Ser Ala Asp Gln Ala Lys Glu Ala Ile Ala Ser Val Glu Ala Leu
 2225 2230 2235 2240
 Ser Lys Asn Leu Glu Ala Ala Ala Ser Thr Lys Ile Asp Ala Ala Leu
 2245 2250 2255
 Glu Gln Ala Gln His Ile Leu Gly Gln Ile Asn Gly Thr Ser Ile Glu
 2260 2265 2270
 Leu Thr Pro Asn Glu Gln Val Leu Glu Lys Ala Arg Lys Leu Tyr Glu
 2275 2280 2285
 Glu Val Asn Thr Leu Val Leu Pro Ile Lys Ala Gln Asn Lys Ser Leu
 2290 2295 2300
 Asn Ala Leu Lys Asn Asp Ile Gly Glu Phe Ser Asp His Leu Glu Asp
 2305 2310 2315 2320
 Leu Phe Asn Trp Ser Glu Ala Ser Gln Ala Lys Ser Ala Asp Val Glu
 2325 2330 2335

Arg Arg Asn Val Ala Asn Gln Lys Ala Phe Asp Asn Ser Lys Phe Asp
 2340 2345 2350
 Thr Val Ser Glu Gln Lys Leu Gln Ala Glu Lys Asn Ile Lys Asp Ala
 2355 2360 2365
 Gly Asn Phe Leu Ile Asn Gly Asp Leu Thr Leu Asn Gln Ile Asn Gln
 2370 2375 2380
 Lys Leu Asp Asn Leu Arg Asp Ala Leu Asn Glu Leu Asn Ser Phe Asn
 2385 2390 2395 2400
 Lys Asn Val Asp Glu Glu Leu Pro Val Arg Glu Asp Gln His Lys Glu
 2405 2410 2415
 Ala Asp Ala Leu Thr Asp Gln Ala Glu Gln Lys Ala Ala Glu Leu Ala
 2420 2425 2430
 Ile Lys Ala Gln Asp Leu Ala Ala Gln Tyr Thr Asp Met Thr Ala Ser
 2435 2440 2445
 Ala Glu Pro Ala Ile Lys Ala Ala Thr Ala Tyr Ser Gly Ile Val Glu
 2450 2455 2460
 Ala Val Glu Ala Ala Gln Lys Leu Ser Gln Asp Ala Ile Ser Ala Ala
 2465 2470 2475 2480
 Gly Asn Ala Thr Asp Lys Thr Asp Gly Ile Glu Glu Arg Ala His Leu
 2485 2490 2495
 Ala Asp Thr Gly Ser Thr Asp Leu Leu Gln Arg Ala Arg Gln Ser Leu
 2500 2505 2510
 Gln Lys Val Gln Asp Asp Leu Glu Pro Arg Leu Asn Ala Ser Ala Gly
 2515 2520 2525
 Lys Val Gln Lys Ile Ser Ala Val Asn Asn Ala Thr Glu His Gln Leu
 2530 2535 2540
 Lys Asp Ile Asn Lys Leu Ile Asp Gln Leu Pro Ala Glu Ser Gln Arg
 2545 2550 2555 2560
 Asp Met Trp Lys Asn Ser Asn Ala Asn Ala Ser Asp Ala Leu Glu Ile
 2565 2570 2575
 Leu Lys Asn Val Leu Glu Ile Leu Glu Pro Val Ser Val Gln Thr Pro
 2580 2585 2590
 Lys Glu Leu Glu Lys Ala His Gly Ile Asn Arg Asp Leu Asp Leu Thr
 2595 2600 2605
 Asn Lys Asp Val Ser Gln Ala Asn Lys Gln Leu Asp Asp Val Glu Gly
 2610 2615 2620
 Ser Val Ser Lys Leu Asn Glu Leu Ala Glu Asp Ile Glu Glu Gln Gln
 2625 2630 2635 2640

His Arg Val Gly Ser Gln Ser Arg Gln Leu Gly Gln Glu Ile Glu Asn
 2645 2650 2655
 Leu Lys Ala Gln Val Glu Ala Ala Arg Gln Leu Ala Asn Ser Ile Lys
 2660 2665 2670
 Val Gly Val Asn Phe Lys Pro Ser Thr Ile Leu Glu Leu Lys Thr Pro
 2675 2680 2685
 Glu Lys Thr Lys Leu Leu Ala Thr Arg Thr Asn Leu Ser Thr Tyr Phe
 2690 2695 2700
 Arg Thr Thr Glu Pro Ser Gly Phe Leu Leu Tyr Leu Gly Asn Asp Asn
 2705 2710 2715 2720
 Lys Thr Ala Gln Lys Asn Asn Asp Phe Val Ala Val Glu Ile Val Asn
 2725 2730 2735
 Gly Tyr Pro Ile Leu Thr Ile Asp Leu Gly Asn Gly Pro Glu Arg Ile
 2740 2745 2750
 Thr Ser Asp Lys Tyr Val Ala Asp Gly Arg Trp Tyr Gln Ala Val Val
 2755 2760 2765
 Asp Arg Met Gly Pro Asn Ala Lys Leu Thr Ile Arg Glu Glu Leu Pro
 2770 2775 2780
 Asn Gly Asp Val Val Glu His Ser Lys Ser Gly Tyr Leu Glu Gly Ser
 2785 2790 2795 2800
 Gln Asn Ile Leu His Val Asp Lys Asn Ser Arg Leu Phe Val Gly Gly
 2805 2810 2815
 Tyr Pro Gly Ile Ser Asp Phe Asn Ala Pro Pro Asp Leu Thr Thr Asn
 2820 2825 2830
 Ser Phe Ser Gly Asp Ile Glu Asp Leu Lys Ile Gly Asp Glu Ser Val
 2835 2840 2845
 Gly Leu Trp Asn Phe Val Tyr Gly Asp Asp Asn Asp Gln Gly Ala Arg
 2850 2855 2860
 Glu Arg Asp Val Leu Leu Glu Lys Lys Lys Pro Val Thr Gly Leu Arg
 2865 2870 2875 2880
 Phe Lys Gly Asn Gly Tyr Val Gln Leu Asn Ala Thr Ser Asn Leu Lys
 2885 2890 2895
 Ser Arg Ser Ser Ile Gln Phe Ser Phe Lys Ala Asp Lys Asp Thr Ser
 2900 2905 2910
 Asn Gly Leu Leu Phe Phe Tyr Gly Arg Asp Lys His Tyr Met Ser Ile
 2915 2920 2925
 Glu Met Ile Asp Gly Ala Ile Phe Phe Asn Ile Ser Leu Gly Glu Gly
 2930 2935 2940

Gly Gly Val Gln Ser Gly Ser Gln Asp Arg Tyr Asn Asp Asn Gln Trp
 2945 2950 2955 2960
 His Lys Val Gln Ala Glu Arg Glu Asn Arg Asn Gly Leu Leu Lys Val
 2965 2970 2975
 Asp Asp Ile Val Ile Ser Arg Thr Asn Ala Pro Leu Glu Ala Asp Leu
 2980 2985 2990
 Glu Leu Pro Lys Leu Arg Arg Leu Tyr Phe Gly Gly His Pro Arg Arg
 2995 3000 3005
 Leu Asn Thr Ser Ile Ser Leu Gln Pro Asn Phe Asp Gly Cys Ile Asp
 3010 3015 3020
 Asn Val Val Ile Asn Gln Gly Val Val Asp Leu Thr Glu Tyr Val Thr
 3025 3030 3035 3040
 Gly Gly Gly Val Glu Glu Gly Cys Ser Ala Lys Phe Ser Thr Val Val
 3045 3050 3055
 Ser Tyr Ala Pro His Glu Tyr Gly Phe Leu Arg Met Asn Asn Val Ser
 3060 3065 3070
 Ser Asp Asn Asn Leu His Val Val Leu His Phe Lys Thr Thr Gln Pro
 3075 3080 3085
 Asn Gly Val Leu Phe Tyr Ala Ala Asn His Asp Gln Ser Ser Thr Ile
 3090 3095 3100
 Gly Leu Ser Leu Gln Asp Gly Leu Leu Lys Leu Asn Ser Met Gly Ser
 3105 3110 3115 3120
 Gln Leu Val Ile Asp Asp Arg Ile Leu Asn Asp Gly Glu Asp His Val
 3125 3130 3135
 Val Thr Val Gln His Thr Gln Gly Glu Leu Arg Leu Thr Val Asp Asp
 3140 3145 3150
 Val Asp Asn Lys Arg Leu Gly Ser Pro Gln Pro Leu Ile Leu Glu Gly
 3155 3160 3165
 Gly Asp Ile Phe Phe Ala Gly Leu Pro Asp Asn Tyr Arg Thr Pro Arg
 3170 3175 3180
 Asn Ala Leu Ala Ser Leu Ala Tyr Phe Val Gly Cys Ile Ser Asp Val
 3185 3190 3195 3200
 Thr Val Asn Glu Glu Ile Ile Asn Phe Ala Asn Ser Ala Glu Lys Lys
 3205 3210 3215
 Asn Gly Asn Ile Asn Gly Cys Pro Pro His Val Leu Ala Tyr Glu Pro
 3220 3225 3230
 Ser Leu Val Pro Ser Tyr Tyr Pro Ser Gly Asp Asn Glu Val Glu Ser
 3235 3240 3245

Pro Trp Ser Asn Ala Asp Thr Leu Pro Pro Leu Lys Pro Asp Ile Glu
 3250 3255 3260
 Ser Thr Leu Pro Pro Thr Thr Pro Thr Thr Thr Thr Thr Thr Thr
 3265 3270 3275 3280
 Thr Thr Thr Ser Thr Thr Thr Thr Ser Thr Thr Thr Thr Thr Thr Thr
 3285 3290 3295
 Pro Ser Pro Ile Val Ile Asp Glu Glu Lys Glu Ile Glu Ala Lys Thr
 3300 3305 3310
 Pro Gln Lys Ile Leu Thr Thr Arg Pro Pro Ala Lys Leu Asn Leu Pro
 3315 3320 3325
 Ser Asp Glu Arg Cys Lys Leu Pro Glu Gln Pro Asn Phe Asp Val Asp
 3330 3335 3340
 Phe Thr Glu Ala Gly Tyr Arg Phe Tyr Gly Leu Arg Glu Gln Arg Leu
 3345 3350 3355 3360
 Gln Ile Asn Ser Leu Pro Val Lys Val Arg Arg His His Asp Ile Gly
 3365 3370 3375
 Ile Ser Phe Arg Thr Glu Arg Pro Asn Gly Leu Leu Ile Tyr Ala Gly
 3380 3385 3390
 Ser Lys Gln Arg Asp Asp Phe Ile Ala Val Tyr Leu Leu Asp Gly Arg
 3395 3400 3405
 Val Thr Tyr Glu Ile Arg Val Gly Ala Gln Leu Gln Ala Lys Ile Thr
 3410 3415 3420
 Thr Glu Ala Glu Leu Asn Asp Gly Thr Trp His Thr Val Glu Val Val
 3425 3430 3435 3440
 Arg Thr Gln Arg Lys Val Ser Leu Leu Ile Asp Lys Leu Glu Gln Pro
 3445 3450 3455
 Gly Ser Val Asp Leu Asn Ala Glu Arg Ser Ala Pro Val Leu Ala Val
 3460 3465 3470
 Glu Leu Pro Ile Tyr Leu Gly Gly Val Asn Lys Phe Leu Glu Ser Glu
 3475 3480 3485
 Val Lys Asn Leu Thr Asp Phe Lys Thr Glu Val Pro Tyr Phe Asn Gly
 3490 3495 3500
 Cys Leu Lys Asn Ile Lys Phe Asp Ala Met Asp Leu Glu Thr Pro Pro
 3505 3510 3515 3520
 Glu Glu Phe Gly Val Val Pro Cys Ser Glu Gln Val Glu Arg Gly Leu
 3525 3530 3535
 Phe Phe Asn Asn Gln Lys Ala Phe Val Lys Ile Phe Asp His Phe Asp
 3540 3545 3550

Val Gly Thr Glu Met Lys Ile Ser Phe Asp Phe Arg Pro Arg Asp Pro
 3555 3560 3565
 Asn Gly Leu Leu Phe Ser Val His Gly Lys Asn Ser Tyr Ala Ile Leu
 3570 3575 3580
 Glu Leu Val Asp Asn Thr Leu Tyr Phe Thr Val Lys Thr Asp Leu Lys
 3585 3590 3595 3600
 Asn Ile Val Ser Thr Asn Tyr Lys Leu Pro Asn Asn Glu Ser Phe Cys
 3605 3610 3615
 Asp Gly Lys Thr Arg Asn Val Gln Ala Ile Lys Ser Lys Phe Val Ile
 3620 3625 3630
 Asn Ile Ala Val Asp Phe Ile Ser Ser Asn Pro Gly Val Gly Asn Glu
 3635 3640 3645
 Gly Ser Val Ile Thr Arg Thr Asn Arg Pro Leu Phe Leu Gly Gly His
 3650 3655 3660
 Val Ala Phe Gln Arg Ala Pro Gly Ile Lys Thr Lys Lys Ser Phe Lys
 3665 3670 3675 3680
 Gly Cys Ile Ser Lys Val Glu Val Asn Gln Arg Met Ile Asn Ile Thr
 3685 3690 3695
 Pro Asn Met Val Val Gly Asp Ile Trp Gln Gly Tyr Cys Pro Leu Asn
 3700 3705 3710

<210> 49
 <211> 1634
 <212> PRT
 <213> Homo sapiens

<400> 49
 Met Ala Ala Gly Ala Ala Ala Arg Val Leu Val Asp Arg Pro Pro Arg
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 Ala Pro Ser Ala Thr Pro Arg Ala Asp Ser Ala Thr Ala Asp Gln Gly
 20 25 30
 Pro Trp Asp Pro Ser Ala Ala Ser Val Pro Leu Ala Thr Gly Gly Ser
 35 40 45
 Leu Ser Arg Ala Ala Gly Ala Ala Ser Ala Leu Gly Ala Ala Val Thr
 50 55 60
 Leu Thr Arg Ala Ala Ala Thr Ala Pro Arg Gly Ser Ala Gly Ser Ala
 65 70 75 80
 Ala Thr Pro Ala Ala Ser Ser Ile Arg Cys Leu Phe Gln Ala Gly Leu
 85 90 95

Trp Ala Thr Ala Ser Thr Val Lys Val Cys Asp His Cys Val Val Leu
 100 105 110
 Leu Leu Asp Asp Leu Glu Arg Ala Gly Ala Leu Leu Pro Ala Ile His
 115 120 125
 Glu Gln Leu Arg Gly Ile Asn Ala Ser Ser Met Ala Trp Ala Arg Leu
 130 135 140
 His Arg Leu Asn Ala Ser Ile Ala Asp Leu Gln Ser Gln Leu Arg Ser
 145 150 155 160
 Pro Leu Gly Pro Arg His Glu Thr Ala Gln Gln Leu Glu Val Leu Glu
 165 170 175
 Gln Gln Ser Thr Ser Leu Gly Gln Asp Ala Arg Arg Leu Gly Gly Gln
 180 185 190
 Ala Val Gly Thr Arg Asp Gln Ala Ser Gln Leu Leu Ala Gly Thr Glu
 195 200 205
 Ala Thr Leu Gly His Ala Lys Thr Leu Leu Ala Ala Ile Arg Ala Val
 210 215 220
 Asp Arg Thr Leu Ser Glu Leu Met Ser Gln Thr Gly His Leu Gly Leu
 225 230 235 240
 Ala Asn Ala Ser Ala Pro Ser Gly Glu Gln Leu Leu Arg Thr Leu Ala
 245 250 255
 Glu Val Glu Arg Leu Leu Trp Glu Met Arg Ala Arg Asp Leu Gly Ala
 260 265 270
 Pro Gln Ala Ala Ala Glu Ala Glu Leu Ala Ala Ala Gln Arg Leu Leu
 275 280 285
 Ala Arg Val Gln Glu Gln Leu Ser Ser Leu Trp Glu Glu Asn Gln Ala
 290 295 300
 Leu Ala Thr Gln Thr Arg Asp Arg Leu Ala Gln His Glu Ala Gly Leu
 305 310 315 320
 Met Asp Leu Arg Glu Ala Leu Asn Arg Ala Val Asp Ala Thr Arg Glu
 325 330 335
 Ala Gln Glu Leu Asn Ser Arg Asn Gln Glu Arg Leu Glu Glu Ala Leu
 340 345 350
 Gln Arg Lys Gln Glu Leu Ser Arg Asp Asn Ala Thr Leu Gln Ala Thr
 355 360 365
 Leu His Ala Ala Arg Asp Thr Leu Ala Ser Val Phe Arg Leu Leu His
 370 375 380
 Ser Leu Asp Gln Ala Lys Glu Glu Leu Glu Arg Leu Ala Ala Ser Leu
 385 390 395 400

Asp Gly Ala Arg Thr Pro Leu Leu Gln Arg Met Gln Thr Phe Ser Pro
 405 410 415
 Ala Gly Ser Lys Leu Arg Leu Val Glu Ala Ala Glu Ala His Ala Gln
 420 425 430
 Gln Leu Gly Gln Leu Ala Leu Asn Leu Ser Ser Ile Ile Leu Asp Val
 435 440 445
 Asn Gln Asp Arg Leu Thr Gln Arg Ala Ile Glu Ala Ser Asn Ala Tyr
 450 455 460
 Ser Arg Ile Leu Gln Ala Val Gln Ala Ala Glu Asp Ala Ala Gly Gln
 465 470 475 480
 Ala Leu Gln Gln Ala Asp His Thr Trp Ala Thr Val Val Arg Gln Gly
 485 490 495
 Leu Val Asp Arg Ala Gln Gln Leu Leu Ala Asn Ser Thr Ala Leu Glu
 500 505 510
 Glu Ala Met Leu Gln Glu Gln Gln Arg Leu Gly Leu Val Trp Ala Ala
 515 520 525
 Leu Gln Gly Ala Arg Thr Gln Leu Arg Asp Val Arg Ala Lys Lys Asp
 530 535 540
 Gln Leu Glu Ala His Ile Gln Ala Ala Gln Ala Met Leu Ala Met Asp
 545 550 555 560
 Thr Asp Glu Thr Ser Lys Lys Ile Ala His Ala Lys Ala Val Ala Ala
 565 570 575
 Glu Ala Gln Asp Thr Ala Thr Arg Val Gln Ser Gln Leu Gln Ala Met
 580 585 590
 Gln Glu Asn Val Glu Arg Trp Gln Gly Gln Tyr Glu Gly Leu Arg Gly
 595 600 605
 Gln Asp Leu Gly Gln Ala Val Leu Asp Ala Gly His Ser Val Ser Thr
 610 615 620
 Leu Glu Lys Thr Leu Pro Gln Leu Leu Ala Lys Leu Ser Ile Leu Glu
 625 630 635 640
 Asn Arg Gly Val His Asn Ala Ser Leu Ala Leu Ser Ala Ser Ile Gly
 645 650 655
 Arg Val Arg Glu Leu Ile Ala Gln Ala Arg Gly Ala Ala Ser Lys Val
 660 665 670
 Lys Val Pro Met Lys Phe Asn Gly Arg Ser Gly Val Gln Leu Arg Thr
 675 680 685
 Pro Arg Asp Leu Ala Asp Leu Ala Ala Tyr Thr Ala Leu Lys Phe Tyr
 690 695 700

Leu Gln Gly Pro Glu Pro Glu Pro Gly Gln Gly Thr Glu Asp Arg Phe
 705 710 715 720
 Val Met Tyr Met Gly Ser Arg Gln Ala Thr Gly Asp Tyr Met Gly Val
 725 730 735
 Ser Leu Arg Asp Lys Lys Val His Trp Val Tyr Gln Leu Gly Glu Ala
 740 745 750
 Gly Pro Ala Val Leu Ser Ile Asp Glu Asp Ile Gly Glu Gln Phe Ala
 755 760 765
 Ala Val Ser Leu Asp Arg Thr Leu Gln Phe Gly His Met Ser Val Thr
 770 775 780
 Val Glu Arg Gln Met Ile Gln Glu Thr Lys Gly Asp Thr Val Ala Pro
 785 790 795 800
 Gly Ala Glu Gly Leu Leu Asn Leu Arg Pro Asp Asp Phe Val Phe Tyr
 805 810 815
 Val Gly Gly Tyr Pro Ser Thr Phe Thr Pro Pro Pro Leu Leu Arg Phe
 820 825 830
 Pro Gly Tyr Arg Gly Cys Ile Glu Met Asp Thr Leu Asn Glu Glu Val
 835 840 845
 Val Ser Leu Tyr Asn Phe Glu Arg Thr Phe Gln Leu Asp Thr Ala Val
 850 855 860
 Asp Arg Pro Cys Ala Arg Ser Lys Ser Thr Gly Asp Pro Trp Leu Thr
 865 870 875 880
 Asp Gly Ser Tyr Leu Asp Gly Thr Gly Phe Ala Arg Ile Ser Phe Asp
 885 890 895
 Ser Gln Ile Ser Thr Thr Lys Arg Phe Glu Gln Glu Leu Arg Leu Val
 900 905 910
 Ser Tyr Ser Gly Val Leu Phe Phe Leu Lys Gln Gln Ser Gln Phe Leu
 915 920 925
 Cys Leu Ala Val Gln Glu Gly Ser Leu Val Leu Leu Tyr Asp Phe Gly
 930 935 940
 Ala Gly Leu Lys Lys Ala Val Pro Leu Gln Pro Pro Pro Pro Leu Thr
 945 950 955 960
 Ser Ala Ser Lys Ala Ile Gln Val Phe Leu Leu Gly Gly Ser Arg Lys
 965 970 975
 Arg Val Leu Val Arg Val Glu Arg Ala Thr Val Tyr Ser Val Glu Gln
 980 985 990
 Asp Asn Asp Leu Glu Leu Ala Asp Ala Tyr Tyr Leu Gly Gly Val Pro
 995 1000 1005

Pro Asp Gln Leu Pro Pro Ser Leu Arg Arg Leu Phe Pro Thr Gly Gly
 1010 1015 1020
 Ser Val Arg Gly Cys Val Lys Gly Ile Lys Ala Leu Gly Lys Tyr Val
 1025 1030 1035 1040
 Asp Leu Lys Arg Leu Asn Thr Thr Gly Val Ser Ala Gly Cys Thr Ala
 1045 1050 1055
 Asp Leu Leu Val Gly Arg Ala Met Thr Phe His Gly His Gly Phe Leu
 1060 1065 1070
 Arg Leu Ala Leu Ser Asn Val Ala Pro Leu Thr Gly Asn Val Tyr Ser
 1075 1080 1085
 Gly Phe Gly Phe His Ser Ala Gln Asp Ser Ala Leu Leu Tyr Tyr Arg
 1090 1095 1100
 Ala Ser Pro Asp Gly Leu Cys Gln Val Ser Leu Gln Gln Gly Arg Val
 1105 1110 1115 1120
 Ser Leu Gln Leu Leu Arg Thr Glu Val Lys Thr Gln Ala Gly Phe Ala
 1125 1130 1135
 Asp Gly Ala Pro His Tyr Val Ala Phe Tyr Ser Asn Ala Thr Gly Val
 1140 1145 1150
 Trp Leu Tyr Val Asp Asp Gln Leu Gln Gln Met Lys Pro His Arg Gly
 1155 1160 1165
 Pro Pro Pro Glu Leu Gln Pro Gln Pro Glu Gly Pro Pro Arg Leu Leu
 1170 1175 1180
 Leu Gly Gly Leu Pro Glu Ser Gly Thr Ile Tyr Asn Phe Ser Gly Cys
 1185 1190 1195 1200
 Ile Ser Asn Val Phe Val Gln Arg Leu Leu Gly Pro Gln Arg Val Phe
 1205 1210 1215
 Asp Leu Gln Gln Asn Leu Gly Ser Val Asn Val Ser Thr Gly Cys Ala
 1220 1225 1230
 Pro Ala Leu Gln Ala Gln Thr Pro Gly Leu Gly Pro Arg Gly Leu Gln
 1235 1240 1245
 Ala Thr Ala Arg Lys Ala Ser Arg Arg Ser Arg Gln Pro Ala Arg His
 1250 1255 1260
 Pro Ala Cys Met Leu Pro Pro His Leu Arg Thr Thr Arg Asp Ser Tyr
 1265 1270 1275 1280
 Gln Phe Gly Gly Ser Leu Ser Ser His Leu Glu Phe Val Gly Ile Leu
 1285 1290 1295
 Ala Arg His Arg Asn Trp Pro Ser Leu Ser Met His Val Leu Pro Arg
 1300 1305 1310

Ser Ser Arg Gly Leu Leu Leu Phe Thr Ala Arg Leu Arg Pro Gly Ser
 1315 1320 1325

Pro Ser Leu Ala Leu Phe Leu Ser Asn Gly His Phe Val Ala Gln Met
 1330 1335 1340

Glu Gly Leu Gly Thr Arg Leu Arg Ala Gln Ser Arg Gln Arg Ser Arg
 1345 1350 1355 1360

Pro Gly Arg Trp His Lys Val Ser Val Arg Trp Glu Lys Asn Arg Ile
 1365 1370 1375

Leu Leu Val Thr Asp Gly Ala Arg Ala Trp Ser Gln Glu Gly Pro His
 1380 1385 1390

Arg Gln His Gln Gly Ala Glu His Pro Gln Pro His Thr Leu Phe Val
 1395 1400 1405

Gly Gly Leu Pro Ala Ser Ser His Ser Ser Lys Leu Pro Val Thr Val
 1410 1415 1420

Gly Phe Ser Gly Cys Val Lys Arg Leu Arg Leu His Gly Arg Pro Leu
 1425 1430 1435 1440

Gly Ala Pro Thr Arg Met Ala Gly Val Thr Pro Cys Ile Leu Gly Pro
 1445 1450 1455

Leu Glu Ala Gly Leu Phe Phe Pro Gly Ser Gly Gly Val Ile Thr Leu
 1460 1465 1470

Asp Leu Pro Gly Ala Thr Leu Pro Asp Val Gly Leu Glu Leu Glu Val
 1475 1480 1485

Arg Pro Leu Ala Val Thr Gly Leu Ile Phe His Leu Gly Gln Ala Arg
 1490 1495 1500

Thr Pro Pro Tyr Leu Gln Leu Gln Val Thr Glu Lys Gln Val Leu Leu
 1505 1510 1515 1520

Arg Ala Asp Asp Gly Ala Gly Glu Phe Ser Thr Ser Val Thr Arg Pro
 1525 1530 1535

Ser Val Leu Cys Asp Gly Gln Trp His Arg Leu Ala Val Met Lys Ser
 1540 1545 1550

Gly Asn Val Leu Arg Leu Glu Val Asp Ala Gln Ser Asn His Thr Val
 1555 1560 1565

Gly Pro Leu Leu Ala Ala Ala Ala Gly Ala Pro Ala Pro Leu Tyr Leu
 1570 1575 1580

Gly Gly Leu Pro Glu Pro Met Ala Val Gln Pro Trp Pro Pro Ala Tyr
 1585 1590 1595 1600

Cys Gly Cys Met Arg Arg Leu Ala Val Asn Arg Ser Pro Val Ala Met
 1605 1610 1615

Thr Arg Ser Val Glu Val His Gly Ala Val Gly Ala Ser Gly Cys Pro
 1620 1625 1630

Ala Ala

<210> 50
 <211> 953
 <212> PRT
 <213> Homo sapiens

<400> 50
 Ser Gly Val Gln Leu Arg Thr Pro Arg Asp Leu Ala Asp Leu Ala Ala
 1 5 10 15

Tyr Thr Ala Leu Lys Phe Tyr Leu Gln Gly Pro Glu Pro Glu Pro Gly
 20 25 30

Gln Gly Thr Glu Asp Arg Phe Val Met Tyr Met Gly Ser Arg Gln Ala
 35 40 45

Thr Gly Asp Tyr Met Gly Val Ser Leu Arg Asp Lys Lys Val His Trp
 50 55 60

Val Tyr Gln Leu Gly Glu Ala Gly Pro Ala Val Leu Ser Ile Asp Glu
 65 70 75 80

Asp Ile Gly Glu Gln Phe Ala Ala Val Ser Leu Asp Arg Thr Leu Gln
 85 90 95

Phe Gly His Met Ser Val Thr Val Glu Arg Gln Met Ile Gln Glu Thr
 100 105 110

Lys Gly Asp Thr Val Ala Pro Gly Ala Glu Gly Leu Leu Asn Leu Arg
 115 120 125

Pro Asp Asp Phe Val Phe Tyr Val Gly Gly Tyr Pro Ser Thr Phe Thr
 130 135 140

Pro Pro Pro Leu Leu Arg Phe Pro Gly Tyr Arg Gly Cys Ile Glu Met
 145 150 155 160

Asp Thr Leu Asn Glu Glu Val Val Ser Leu Tyr Asn Phe Glu Arg Thr
 165 170 175

Phe Gln Leu Asp Thr Ala Val Asp Arg Pro Cys Ala Arg Ser Lys Ser
 180 185 190

Thr Gly Asp Pro Trp Leu Thr Asp Gly Ser Tyr Leu Asp Gly Thr Gly
 195 200 205

Phe Ala Arg Ile Ser Phe Asp Ser Gln Ile Ser Thr Thr Lys Arg Phe
 210 215 220

Glu Gln Glu Leu Arg Leu Val Ser Tyr Ser Gly Val Leu Phe Phe Leu

225		230		235		240
Lys Gln Gln Ser Gln Phe Leu Cys Leu Ala Val Gln Glu Gly Ser Leu						
		245		250		255
Val Leu Leu Tyr Asp Phe Gly Ala Gly Leu Lys Lys Ala Val Pro Leu						
		260		265		270
Gln Pro Pro Pro Pro Leu Thr Ser Ala Ser Lys Ala Ile Gln Val Phe						
		275		280		285
Leu Leu Gly Gly Ser Arg Lys Arg Val Leu Val Arg Val Glu Arg Ala						
		290		295		300
Thr Val Tyr Ser Val Glu Gln Asp Asn Asp Leu Glu Leu Ala Asp Ala						
		305		310		315
Tyr Tyr Leu Gly Gly Val Pro Pro Asp Gln Leu Pro Pro Ser Leu Arg						
		325		330		335
Trp Leu Phe Pro Thr Gly Gly Ser Val Arg Gly Cys Val Lys Gly Ile						
		340		345		350
Lys Ala Leu Gly Lys Tyr Val Asp Leu Lys Arg Leu Asn Thr Thr Gly						
		355		360		365
Val Ser Ala Gly Cys Thr Ala Asp Leu Leu Val Gly Arg Ala Met Thr						
		370		375		380
Phe His Gly His Gly Phe Leu Arg Leu Ala Leu Ser Asn Val Ala Pro						
		385		390		395
Leu Thr Gly Asn Val Tyr Ser Gly Phe Gly Phe His Ser Ala Gln Asp						
		405		410		415
Ser Ala Leu Leu Tyr Tyr Arg Ala Ser Pro Asp Gly Leu Cys Gln Val						
		420		425		430
Ser Leu Gln Gln Gly Arg Val Ser Leu Gln Leu Leu Arg Thr Glu Val						
		435		440		445
Lys Thr Gln Ala Gly Phe Ala Asp Gly Ala Pro His Tyr Val Ala Phe						
		450		455		460
Tyr Ser Asn Ala Thr Gly Val Trp Leu Tyr Val Asp Asp Gln Leu Gln						
		465		470		475
Gln Met Lys Pro His Arg Gly Pro Pro Pro Glu Leu Gln Pro Gln Pro						
		485		490		495
Glu Gly Pro Pro Arg Leu Leu Leu Gly Gly Leu Pro Glu Ser Gly Thr						
		500		505		510
Ile Tyr Asn Phe Ser Gly Cys Ile Ser Asn Val Phe Val Gln Arg Leu						
		515		520		525
Leu Gly Pro Gln Arg Val Phe Asp Leu Gln Gln Asn Leu Gly Ser Val						

530		535		540
Asn Val Ser Thr Gly Cys Ala Pro Ala Leu Gln Ala Gln Thr Pro Gly				
545		550		555 560
Leu Gly Pro Arg Gly Leu Gln Ala Thr Ala Arg Lys Ala Ser Arg Arg				
	565		570	575
Ser Arg Gln Pro Ala Arg His Pro Ala Cys Met Leu Pro Pro His Leu				
	580		585	590
Arg Thr Thr Arg Asp Ser Tyr Gln Phe Gly Gly Ser Leu Ser Ser His				
	595		600	605
Leu Glu Phe Val Gly Ile Leu Ala Arg His Arg Asn Trp Pro Ser Leu				
	610		615	620
Ser Met His Val Leu Pro Arg Ser Ser Arg Gly Leu Leu Leu Phe Thr				
625		630		635 640
Ala Arg Leu Arg Pro Gly Ser Pro Ser Leu Ala Leu Phe Leu Ser Asn				
	645		650	655
Gly His Phe Val Ala Gln Met Glu Gly Leu Gly Thr Arg Leu Arg Ala				
	660		665	670
Gln Ser Arg Gln Arg Ser Arg Pro Gly Arg Trp His Lys Val Ser Val				
	675		680	685
Arg Trp Glu Lys Asn Arg Ile Leu Leu Val Thr Asp Gly Ala Arg Ala				
	690		695	700
Trp Ser Gln Glu Gly Pro His Arg Gln His Gln Gly Ala Glu His Pro				
705		710		715 720
Gln Pro His Thr Leu Phe Val Gly Gly Leu Pro Ala Ser Ser His Ser				
	725		730	735
Ser Lys Leu Pro Val Thr Val Gly Phe Ser Gly Cys Val Lys Arg Leu				
	740		745	750
Arg Leu His Gly Arg Pro Leu Gly Ala Pro Thr Arg Met Ala Gly Val				
	755		760	765
Thr Pro Cys Ile Leu Gly Pro Leu Glu Ala Gly Leu Phe Phe Pro Gly				
	770		775	780
Ser Gly Gly Val Ile Thr Leu Asp Leu Pro Gly Ala Thr Leu Pro Asp				
785		790		795 800
Val Gly Leu Glu Leu Glu Val Arg Pro Leu Ala Val Thr Gly Leu Ile				
	805		810	815
Phe His Leu Gly Gln Ala Arg Thr Pro Pro Tyr Leu Gln Leu Gln Val				
	820		825	830
Thr Glu Lys Gln Val Leu Leu Arg Ala Asp Asp Gly Ala Gly Glu Phe				

835 840 845
 Ser Thr Ser Val Thr Arg Pro Ser Val Leu Cys Asp Gly Gln Trp His
 850 855 860
 Arg Leu Ala Val Met Lys Ser Gly Asn Val Leu Arg Leu Glu Val Asp
 865 870 875 880
 Ala Gln Ser Asn His Thr Val Gly Pro Leu Leu Ala Ala Ala Gly
 885 890 895
 Ala Pro Ala Pro Leu Tyr Leu Gly Gly Leu Pro Glu Pro Met Ala Val
 900 905 910
 Gln Pro Trp Pro Pro Ala Tyr Cys Gly Cys Met Arg Arg Leu Ala Val
 915 920 925
 Asn Arg Ser Pro Val Ala Met Thr Arg Ser Val Glu Val His Gly Ala
 930 935 940
 Val Gly Ala Ser Gly Cys Pro Ala Ala
 945 950

 <210> 51
 <211> 3712
 <212> PRT
 <213> Drosophila melanogaster

 <400> 51
 Met Gly His Gly Val Ala Ser Ile Gly Ala Leu Leu Val Ile Leu Ala
 1 5 10 15
 Ile Ser Tyr Cys Gln Ala Glu Leu Thr Pro Pro Tyr Phe Asn Leu Ala
 20 25 30
 Thr Gly Arg Lys Ile Tyr Ala Thr Ala Thr Cys Gly Gln Asp Thr Asp
 35 40 45
 Gly Pro Glu Leu Tyr Cys Lys Leu Val Gly Ala Asn Thr Glu His Asp
 50 55 60
 His Ile Asp Tyr Ser Val Ile Gln Gly Gln Val Cys Asp Tyr Cys Asp
 65 70 75 80
 Pro Thr Val Pro Glu Arg Asn His Pro Pro Glu Asn Ala Ile Asp Gly
 85 90 95
 Thr Glu Ala Trp Trp Gln Ser Pro Pro Leu Ser Arg Gly Met Lys Phe
 100 105 110
 Asn Glu Val Asn Leu Thr Ile Asn Phe Glu Gln Glu Phe His Val Ala
 115 120 125
 Tyr Leu Phe Ile Arg Met Gly Asn Ser Pro Arg Pro Gly Leu Trp Thr
 130 135 140

Leu Glu Lys Ser Thr Asp Tyr Gly Lys Thr Trp Thr Pro Trp Gln His
 145 150 155 160
 Phe Ser Asp Thr Pro Ala Asp Cys Glu Thr Tyr Phe Gly Lys Asp Thr
 165 170 175
 Tyr Lys Pro Ile Thr Arg Asp Asp Asp Val Ile Cys Thr Thr Glu Tyr
 180 185 190
 Ser Lys Ile Val Pro Leu Glu Asn Gly Glu Ile Pro Val Met Leu Leu
 195 200 205
 Asn Glu Arg Pro Ser Ser Thr Asn Tyr Phe Asn Ser Thr Val Leu Gln
 210 215 220
 Glu Trp Thr Arg Ala Thr Asn Val Arg Ile Arg Leu Leu Arg Thr Lys
 225 230 235 240
 Asn Leu Leu Gly His Leu Met Ser Val Ala Arg Gln Asp Pro Thr Val
 245 250 255
 Thr Arg Arg Tyr Phe Tyr Ser Ile Lys Asp Ile Ser Ile Gly Gly Arg
 260 265 270
 Cys Met Cys Asn Gly His Ala Asp Thr Cys Asp Val Lys Asp Pro Lys
 275 280 285
 Ser Pro Val Arg Ile Leu Ala Cys Arg Cys Gln His His Thr Cys Gly
 290 295 300
 Ile Gln Cys Asn Glu Cys Cys Pro Gly Phe Glu Gln Lys Lys Trp Arg
 305 310 315 320
 Gln Asn Thr Asn Ala Arg Pro Phe Asn Cys Glu Pro Cys Asn Cys His
 325 330 335
 Gly His Ser Asn Glu Cys Lys Tyr Asp Glu Glu Val Asn Arg Lys Gly
 340 345 350
 Leu Ser Leu Asp Ile His Gly His Tyr Asp Gly Gly Gly Val Cys Gln
 355 360 365
 Asn Cys Gln His Asn Thr Val Gly Ile Asn Cys Asn Lys Cys Lys Pro
 370 375 380
 Lys Tyr Tyr Arg Pro Lys Gly Lys His Trp Asn Glu Thr Asp Val Cys
 385 390 395 400
 Ser Pro Cys Gln Cys Asp Tyr Phe Phe Ser Thr Gly His Cys Glu Glu
 405 410 415
 Glu Thr Gly Asn Cys Glu Cys Arg Ala Ala Phe Gln Pro Pro Ser Cys
 420 425 430
 Asp Ser Cys Ala Tyr Gly Tyr Tyr Gly Tyr Pro Asn Cys Arg Glu Cys
 435 440 445

Glu Cys Asn Leu Asn Gly Thr Asn Gly Tyr His Cys Glu Ala Glu Ser
 450 455 460
 Gly Gln Gln Cys Pro Cys Lys Ile Asn Phe Ala Gly Ala Tyr Cys Lys
 465 470 475 480
 Gln Cys Ala Glu Gly Tyr Tyr Gly Phe Pro Glu Cys Lys Ala Cys Glu
 485 490 495
 Cys Asn Lys Ile Gly Ser Ile Thr Asn Asp Cys Asn Val Thr Thr Gly
 500 505 510
 Glu Cys Lys Cys Leu Thr Asn Phe Gly Gly Asp Asn Cys Glu Arg Cys
 515 520 525
 Lys His Gly Tyr Phe Asn Tyr Pro Thr Cys Ser Tyr Cys Asp Cys Asp
 530 535 540
 Asn Gln Gly Thr Glu Ser Glu Ile Cys Asn Lys Gln Ser Gly Gln Cys
 545 550 555 560
 Ile Cys Arg Glu Gly Phe Gly Gly Pro Arg Cys Asp Gln Cys Leu Pro
 565 570 575
 Gly Phe Tyr Asn Tyr Pro Asp Cys Lys Pro Cys Asn Cys Ser Ser Thr
 580 585 590
 Gly Ser Ser Ala Ile Thr Cys Asp Asn Thr Gly Lys Cys Asn Cys Leu
 595 600 605
 Asn Asn Phe Ala Gly Lys Gln Cys Thr Leu Cys Thr Ala Gly Tyr Tyr
 610 615 620
 Ser Tyr Pro Asp Cys Leu Pro Cys His Cys Asp Ser His Gly Ser Gln
 625 630 635 640
 Gly Val Ser Cys Asn Ser Asp Gly Gln Cys Leu Cys Gln Pro Asn Phe
 645 650 655
 Asp Gly Arg Gln Cys Asp Ser Cys Lys Glu Gly Phe Tyr Asn Phe Pro
 660 665 670
 Ser Cys Glu Asp Cys Asn Cys Asp Pro Ala Gly Val Ile Asp Lys Phe
 675 680 685
 Ala Gly Cys Gly Ser Val Pro Val Gly Glu Leu Cys Lys Cys Lys Glu
 690 695 700
 Arg Val Thr Gly Arg Ile Cys Asn Glu Cys Lys Pro Leu Tyr Trp Asn
 705 710 715 720
 Leu Asn Ile Ser Asn Thr Glu Gly Cys Glu Ile Cys Asp Cys Trp Thr
 725 730 735
 Asp Gly Thr Ile Ser Ala Leu Asp Thr Cys Thr Ser Lys Ser Gly Gln
 740 745 750

Cys Pro Cys Lys Pro His Thr Gln Gly Arg Arg Cys Gln Glu Cys Arg
 755 760 765
 Asp Gly Thr Phe Asp Leu Asp Ser Ala Ser Leu Phe Gly Cys Lys Asp
 770 775 780
 Cys Ser Cys Asp Val Gly Gly Ser Trp Gln Ser Val Cys Asp Lys Ile
 785 790 795 800
 Ser Gly Gln Cys Lys Cys His Pro Arg Ile Thr Gly Leu Ala Cys Thr
 805 810 815
 Gln Pro Leu Thr Thr His Phe Phe Pro Thr Leu His Gln Phe Gln Tyr
 820 825 830
 Glu Tyr Glu Asp Gly Ser Leu Pro Ser Gly Thr Gln Val Arg Tyr Asp
 835 840 845
 Tyr Asp Glu Ala Ala Phe Pro Gly Phe Ser Ser Lys Gly Tyr Val Val
 850 855 860
 Phe Asn Ala Ile Gln Asn Asp Val Arg Asn Glu Val Asn Val Phe Lys
 865 870 875 880
 Ser Ser Leu Tyr Arg Ile Val Leu Arg Tyr Val Asn Pro Asn Ala Glu
 885 890 895
 Asn Val Thr Ala Thr Ile Ser Val Thr Ser Asp Asn Pro Leu Glu Val
 900 905 910
 Asp Gln His Val Lys Val Leu Leu Gln Pro Thr Ser Glu Pro Gln Phe
 915 920 925
 Val Thr Val Ala Gly Pro Leu Gly Val Lys Pro Ser Ala Ile Val Leu
 930 935 940
 Asp Pro Gly Arg Tyr Val Phe Thr Thr Lys Ala Asn Lys Asn Val Met
 945 950 955 960
 Leu Asp Tyr Phe Val Leu Leu Pro Ala Ala Tyr Tyr Glu Ala Gly Ile
 965 970 975
 Leu Thr Arg His Ile Ser Asn Pro Cys Glu Leu Gly Asn Met Glu Leu
 980 985 990
 Cys Arg His Tyr Lys Tyr Ala Ser Val Glu Val Phe Ser Pro Ala Ala
 995 1000 1005
 Thr Pro Phe Val Ile Gly Glu Asn Ser Lys Pro Thr Asn Pro Val Glu
 1010 1015 1020
 Thr Tyr Thr Asp Pro Glu His Leu Gln Ile Val Ser His Val Gly Asp
 1025 1030 1035 1040
 Ile Pro Val Leu Ser Gly Ser Gln Asn Glu Leu His Tyr Ile Val Asp
 1045 1050 1055

Val Pro Arg Ser Gly Arg Tyr Ile Phe Val Ile Asp Tyr Ile Ser Asp
1060 1065 1070
Arg Asn Phe Pro Asp Ser Tyr Tyr Ile Asn Leu Lys Leu Lys Asp Asn
1075 1080 1085
Pro Asp Ser Glu Thr Ser Val Leu Leu Tyr Pro Cys Leu Tyr Ser Thr
1090 1095 1100
Ile Cys Arg Thr Ser Val Asn Glu Asp Gly Met Glu Lys Ser Phe Tyr
1105 1110 1115 1120
Ile Asn Lys Glu Asp Leu Gln Pro Val Ile Ile Ser Ala Asp Ile Glu
1125 1130 1135
Asp Gly Ser Arg Phe Pro Ile Ile Ser Val Thr Ala Ile Pro Val Asp
1140 1145 1150
Gln Trp Ser Ile Asp Tyr Ile Asn Pro Ser Pro Val Cys Val Ile His
1155 1160 1165
Asp Gln Gln Cys Ala Thr Pro Lys Phe Arg Ser Val Pro Asp Ser Lys
1170 1175 1180
Lys Ile Glu Phe Glu Thr Asp His Glu Asp Arg Ile Ala Thr Asn Lys
1185 1190 1195 1200
Pro Pro Tyr Ala Ser Leu Asp Glu Arg Val Lys Leu Val His Leu Asp
1205 1210 1215
Ser Gln Asn Glu Ala Thr Ile Val Ile Glu Ser Lys Val Asp Ala Thr
1220 1225 1230
Lys Pro Asn Leu Phe Val Ile Leu Val Lys Tyr Tyr Gln Pro Ser His
1235 1240 1245
Pro Lys Tyr Gln Val Tyr Tyr Thr Leu Thr Ala Gly Lys Asn Gln Tyr
1250 1255 1260
Asp Gly Lys Phe Asp Ile Gln His Cys Pro Ser Ser Ser Gly Cys Arg
1265 1270 1275 1280
Gly Val Ile Arg Pro Ala Gly Glu Gly Ser Phe Glu Ile Asp Asp Glu
1285 1290 1295
Phe Lys Phe Thr Ile Thr Thr Asp Arg Ser Gln Ser Val Trp Leu Asp
1300 1305 1310
Tyr Leu Val Val Val Pro Leu Lys Gln Tyr Asn Asp Asp Leu Leu Val
1315 1320 1325
Glu Glu Thr Phe Asp Gln Thr Lys Glu Phe Ile Gln Asn Cys Gly His
1330 1335 1340
Asp His Phe His Ile Thr His Asn Ala Ser Asp Phe Cys Lys Lys Ser
1345 1350 1355 1360

Val Phe Ser Leu Thr Ala Asp Tyr Asn Ser Gly Ala Leu Pro Cys Asn
1365 1370 1375
Cys Asp Tyr Ala Gly Ser Thr Ser Phe Glu Cys His Pro Phe Gly Gly
1380 1385 1390
Gln Cys Gln Cys Lys Pro Asn Val Ile Glu Arg Thr Cys Gly Ala Cys
1395 1400 1405
Arg Ser Arg Tyr Tyr Gly Phe Pro Asp Cys Lys Pro Cys Lys Cys Pro
1410 1415 1420
Asn Ser Ala Met Cys Glu Pro Thr Thr Gly Glu Cys Met Cys Pro Pro
1425 1430 1435 1440
Asn Val Ile Gly Asp Leu Cys Glu Lys Cys Ala Pro Asn Thr Tyr Gly
1445 1450 1455
Phe His Gln Val Ile Gly Cys Glu Glu Cys Ala Cys Asn Pro Met Gly
1460 1465 1470
Ile Ala Asn Gly Asn Ser Gln Cys Asp Leu Phe Asn Gly Thr Cys Glu
1475 1480 1485
Cys Arg Gln Asn Ile Glu Gly Arg Ala Cys Asp Val Cys Ser Asn Gly
1490 1495 1500
Tyr Phe Asn Phe Pro His Cys Glu Gln Cys Ser Cys His Lys Pro Gly
1505 1510 1515 1520
Thr Glu Leu Glu Val Cys Asp Lys Ile Asp Gly Ala Cys Phe Cys Lys
1525 1530 1535
Lys Asn Val Val Gly Arg Asp Cys Asp Gln Cys Val Asp Gly Thr Tyr
1540 1545 1550
Asn Leu Gln Glu Ser Asn Pro Asp Gly Cys Thr Thr Cys Phe Cys Phe
1555 1560 1565
Gly Lys Thr Ser Arg Cys Asp Ser Ala Tyr Leu Arg Val Tyr Asn Val
1570 1575 1580
Ser Leu Leu Lys His Val Ser Ile Thr Thr Pro Glu Phe His Glu Glu
1585 1590 1595 1600
Ser Ile Lys Phe Asp Met Trp Pro Val Pro Ala Asp Glu Ile Leu Leu
1605 1610 1615
Asn Glu Thr Thr Leu Lys Ala Asp Phe Thr Leu Arg Glu Val Asn Asp
1620 1625 1630
Glu Arg Pro Ala Tyr Phe Gly Val Leu Asp Tyr Leu Leu Asn Gln Asn
1635 1640 1645
Asn His Ile Ser Ala Tyr Gly Gly Asp Leu Ala Tyr Thr Leu His Phe
1650 1655 1660

Thr Ser Gly Phe Asp Gly Lys Tyr Ile Val Ala Pro Asp Val Ile Leu
 1665 1670 1675 1680
 Phe Ser Glu His Asn Ala Leu Val His Thr Ser Tyr Glu Gln Pro Ser
 1685 1690 1695
 Arg Asn Glu Pro Phe Thr Asn Arg Val Asn Ile Val Glu Ser Asn Phe
 1700 1705 1710
 Gln Thr Ile Ser Gly Lys Pro Val Ser Arg Ala Asp Phe Met Met Val
 1715 1720 1725
 Leu Arg Asp Leu Lys Val Ile Phe Ile Arg Ala Asn Tyr Trp Glu Gln
 1730 1735 1740
 Thr Leu Val Thr His Leu Ser Asp Val Tyr Leu Thr Leu Ala Asp Glu
 1745 1750 1755 1760
 Asp Ala Asp Gly Thr Gly Glu Tyr Gln Phe Leu Ala Val Glu Arg Cys
 1765 1770 1775
 Ser Cys Pro Pro Gly Tyr Ser Gly His Ser Cys Glu Asp Cys Ala Pro
 1780 1785 1790
 Gly Tyr Tyr Arg Asp Pro Ser Gly Pro Tyr Gly Gly Tyr Cys Ile Pro
 1795 1800 1805
 Cys Glu Cys Asn Gly His Ser Glu Thr Cys Asp Cys Ala Thr Gly Ile
 1810 1815 1820
 Cys Ser Lys Cys Gln His Gly Thr Glu Gly Asp His Cys Glu Arg Cys
 1825 1830 1835 1840
 Val Ser Gly Tyr Tyr Gly Asn Ala Thr Asn Gly Thr Pro Gly Asp Cys
 1845 1850 1855
 Met Ile Cys Ala Cys Pro Leu Pro Phe Asp Ser Asn Asn Phe Ala Thr
 1860 1865 1870
 Ser Cys Glu Ile Ser Glu Ser Gly Asp Gln Ile His Cys Glu Cys Lys
 1875 1880 1885
 Pro Gly Tyr Thr Gly Pro Arg Cys Glu Ser Cys Ala Asn Gly Phe Tyr
 1890 1895 1900
 Gly Glu Pro Glu Ser Ile Gly Gln Val Cys Lys Pro Cys Glu Cys Ser
 1905 1910 1915 1920
 Gly Asn Ile Asn Pro Glu Asp Gln Gly Ser Cys Asp Thr Arg Thr Gly
 1925 1930 1935
 Glu Cys Leu Arg Cys Leu Asn Asn Thr Phe Gly Ala Ala Cys Asn Leu
 1940 1945 1950
 Cys Ala Pro Gly Phe Tyr Gly Asp Ala Ile Lys Leu Lys Asn Cys Gln
 1955 1960 1965

Ser Cys Asp Cys Asp Asp Leu Gly Thr Gln Thr Cys Asp Pro Phe Val
 1970 1975 1980

Gly Val Cys Thr Cys His Glu Asn Val Ile Gly Asp Arg Cys Asp Arg
 1985 1990 1995 2000

Cys Lys Pro Asp His Tyr Gly Phe Glu Ser Gly Val Gly Cys Arg Ala
 2005 2010 2015

Cys Asp Cys Gly Ala Ala Ser Asn Ser Thr Gln Cys Asp Pro His Thr
 2020 2025 2030

Gly His Cys Ala Cys Lys Ser Gly Val Thr Gly Arg Gln Cys Asp Arg
 2035 2040 2045

Cys Ala Val Asp His Trp Lys Tyr Glu Lys Asp Gly Cys Thr Pro Cys
 2050 2055 2060

Asn Cys Asn Gln Gly Tyr Ser Arg Gly Phe Gly Cys Asn Pro Asn Thr
 2065 2070 2075 2080

Gly Lys Cys Gln Cys Leu Pro Gly Val Ile Gly Asp Arg Cys Asp Ala
 2085 2090 2095

Cys Pro Asn Arg Trp Val Leu Ile Lys Asp Glu Gly Cys Gln Glu Cys
 2100 2105 2110

Asn Asn Cys His His Ala Leu Leu Asp Val Thr Asp Arg Met Arg Tyr
 2115 2120 2125

Gln Ile Asp Ser Val Leu Glu Asp Phe Asn Ser Val Thr Leu Ala Phe
 2130 2135 2140

Phe Thr Ser Gln Lys Leu Asn Tyr Tyr Asp Gln Leu Ala Asp Glu Leu
 2145 2150 2155 2160

Glu Pro Lys Val Lys Leu Leu Asp Pro Asn Ser Val Asp Leu Ser Pro
 2165 2170 2175

Ser Lys Lys Ala Asn Ser Glu Leu Glu Ser Asp Ala Lys Ser Tyr Ala
 2180 2185 2190

Lys Gln Val Asn Gln Thr Leu Ala Asn Ala Phe Asp Ile Arg Glu Arg
 2195 2200 2205

Ser Ser Thr Thr Leu Gly Asn Ile Thr Val Ala Tyr Asp Glu Ala Val
 2210 2215 2220

Lys Ser Ala Asp Gln Ala Lys Glu Ala Ile Ala Ser Val Glu Ala Leu
 2225 2230 2235 2240

Ser Lys Asn Leu Glu Ala Ala Ala Ser Thr Lys Ile Asp Ala Ala Leu
 2245 2250 2255

Glu Gln Ala Gln His Ile Leu Gly Gln Ile Asn Gly Thr Ser Ile Glu
 2260 2265 2270

Leu Thr Pro Asn Glu Gln Val Leu Glu Lys Ala Arg Lys Leu Tyr Glu
 2275 2280 2285

Glu Val Asn Thr Leu Val Leu Pro Ile Lys Ala Gln Asn Lys Ser Leu
 2290 2295 2300

Asn Ala Leu Lys Asn Asp Ile Gly Glu Phe Ser Asp His Leu Glu Asp
 2305 2310 2315 2320

Leu Phe Asn Trp Ser Glu Ala Ser Gln Ala Lys Ser Ala Asp Val Glu
 2325 2330 2335

Arg Arg Asn Val Ala Asn Gln Lys Ala Phe Asp Asn Ser Lys Phe Asp
 2340 2345 2350

Thr Val Ser Glu Gln Lys Leu Gln Ala Glu Lys Asn Ile Lys Asp Ala
 2355 2360 2365

Gly Asn Phe Leu Ile Asn Gly Asp Leu Thr Leu Asn Gln Ile Asn Gln
 2370 2375 2380

Lys Leu Asp Asn Leu Arg Asp Ala Leu Asn Glu Leu Asn Ser Phe Asn
 2385 2390 2395 2400

Lys Asn Val Asp Glu Glu Leu Pro Val Arg Glu Asp Gln His Lys Glu
 2405 2410 2415

Ala Asp Ala Leu Thr Asp Gln Ala Glu Gln Lys Ala Ala Glu Leu Ala
 2420 2425 2430

Ile Lys Ala Gln Asp Leu Ala Ala Gln Tyr Thr Asp Met Thr Ala Ser
 2435 2440 2445

Ala Glu Pro Ala Ile Lys Ala Ala Thr Ala Tyr Ser Gly Ile Val Glu
 2450 2455 2460

Ala Val Glu Ala Ala Gln Lys Leu Ser Gln Asp Ala Ile Ser Ala Ala
 2465 2470 2475 2480

Gly Asn Ala Thr Asp Lys Thr Asp Gly Ile Glu Glu Arg Ala His Leu
 2485 2490 2495

Ala Asp Thr Gly Ser Thr Asp Leu Leu Gln Arg Ala Arg Gln Ser Leu
 2500 2505 2510

Gln Lys Val Gln Asp Asp Leu Glu Pro Arg Leu Asn Ala Ser Ala Gly
 2515 2520 2525

Lys Val Gln Lys Ile Ser Ala Val Asn Asn Ala Thr Glu His Gln Leu
 2530 2535 2540

Lys Asp Ile Asn Lys Leu Ile Asp Gln Leu Pro Ala Glu Ser Gln Arg
 2545 2550 2555 2560

Asp Met Trp Lys Asn Ser Asn Ala Asn Ala Ser Asp Ala Leu Glu Ile
 2565 2570 2575

Leu Lys Asn Val Leu Glu Ile Leu Glu Pro Val Ser Val Gln Thr Pro
 2580 2585 2590
 Lys Glu Leu Glu Lys Ala His Gly Ile Asn Arg Asp Leu Asp Leu Thr
 2595 2600 2605
 Asn Lys Asp Val Ser Gln Ala Asn Lys Gln Leu Asp Asp Val Glu Gly
 2610 2615 2620
 Ser Val Ser Lys Leu Ser Glu Leu Ala Glu Asp Ile Glu Glu Gln Gln
 2625 2630 2635 2640
 His Arg Val Gly Ser Gln Ser Arg Gln Leu Gly Gln Glu Ile Glu Asn
 2645 2650 2655
 Leu Lys Ala Gln Val Glu Ala Ala Arg Gln Leu Ala Asn Ser Ile Lys
 2660 2665 2670
 Val Gly Val Asn Phe Lys Pro Ser Thr Ile Leu Glu Leu Lys Thr Pro
 2675 2680 2685
 Glu Lys Thr Lys Leu Leu Ala Thr Arg Thr Asn Leu Ser Thr Tyr Phe
 2690 2695 2700
 Arg Thr Thr Glu Pro Ser Gly Phe Leu Leu Tyr Leu Gly Asn Asp Asn
 2705 2710 2715 2720
 Lys Thr Ala Gln Lys Asn Asn Asp Phe Val Ala Val Glu Ile Val Asn
 2725 2730 2735
 Gly Tyr Pro Ile Leu Thr Ile Asp Leu Gly Asn Gly Pro Glu Arg Ile
 2740 2745 2750
 Thr Ser Asp Lys Tyr Val Ala Asp Gly Arg Trp Tyr Gln Ala Val Val
 2755 2760 2765
 Asp Arg Met Gly Pro Asn Ala Lys Leu Thr Ile Arg Glu Glu Leu Pro
 2770 2775 2780
 Asn Gly Asp Val Val Glu His Ser Lys Ser Gly Tyr Leu Glu Gly Ser
 2785 2790 2795 2800
 Gln Asn Ile Leu His Val Asp Lys Asn Ser Arg Leu Phe Val Gly Gly
 2805 2810 2815
 Tyr Pro Gly Ile Ser Asp Phe Asn Ala Pro Pro Asp Leu Thr Thr Asn
 2820 2825 2830
 Ser Phe Ser Gly Asp Ile Glu Asp Leu Lys Ile Gly Asp Glu Ser Val
 2835 2840 2845
 Gly Leu Trp Asn Phe Val Tyr Gly Asp Asp Asn Asp Gln Gly Ala Arg
 2850 2855 2860
 Glu Arg Asp Val Leu Leu Glu Lys Lys Lys Pro Val Thr Gly Leu Arg
 2865 2870 2875 2880

Phe Lys Gly Asn Gly Tyr Val Gln Leu Asn Ala Thr Ser Asn Leu Lys
2885 2890 2895
Ser Arg Ser Ser Ile Gln Phe Ser Phe Lys Ala Asp Lys Asp Thr Ser
2900 2905 2910
Asn Gly Leu Leu Phe Phe Tyr Gly Arg Asp Lys His Tyr Met Ser Ile
2915 2920 2925
Glu Met Ile Asp Gly Ala Ile Phe Phe Asn Ile Ser Leu Gly Glu Gly
2930 2935 2940
Gly Gly Val Gln Ser Gly Ser Gln Asp Arg Tyr Asn Asp Asn Gln Trp
2945 2950 2955 2960
His Lys Val Gln Ala Glu Arg Glu Asn Arg Asn Gly Leu Leu Lys Val
2965 2970 2975
Asp Asp Ile Val Ile Ser Arg Thr Asn Ala Pro Leu Glu Ala Asp Leu
2980 2985 2990
Glu Leu Pro Lys Leu Arg Arg Leu Tyr Phe Gly Gly His Pro Arg Arg
2995 3000 3005
Leu Asn Thr Ser Ile Ser Leu Gln Pro Asn Phe Asp Gly Cys Ile Asp
3010 3015 3020
Asn Val Val Ile Asn Gln Gly Val Val Asp Leu Thr Glu Tyr Val Thr
3025 3030 3035 3040
Gly Gly Gly Val Glu Glu Gly Cys Ser Ala Lys Phe Ser Thr Val Val
3045 3050 3055
Ser Tyr Ala Pro His Glu Tyr Gly Phe Leu Arg Met Asn Asn Val Ser
3060 3065 3070
Ser Asp Asn Asn Leu His Val Val Leu His Phe Lys Thr Thr Gln Pro
3075 3080 3085
Asn Gly Val Leu Phe Tyr Ala Ala Asn His Asp Gln Ser Ser Thr Ile
3090 3095 3100
Gly Leu Ser Leu Gln Asp Gly Leu Leu Lys Leu Asn Ser Met Gly Ser
3105 3110 3115 3120
Gln Leu Val Ile Asp Asp Arg Ile Leu Asn Asp Gly Glu Asp His Val
3125 3130 3135
Val Thr Val Gln His Thr Gln Gly Glu Leu Arg Leu Thr Val Asp Asp
3140 3145 3150
Val Asp Asn Lys Arg Leu Gly Ser Pro Gln Pro Leu Ile Leu Glu Gly
3155 3160 3165
Gly Asp Ile Phe Phe Ala Gly Leu Pro Asp Asn Tyr Arg Thr Pro Arg
3170 3175 3180

Asn	Ala	Leu	Ala	Ser	Leu	Ala	Tyr	Phe	Val	Gly	Cys	Ile	Ser	Asp	Val
3185					3190					3195					3200
Thr	Val	Asn	Glu	Glu	Ile	Ile	Asn	Phe	Ala	Asn	Ser	Ala	Glu	Lys	Lys
				3205					3210					3215	
Asn	Gly	Asn	Ile	Asn	Gly	Cys	Pro	Pro	His	Val	Leu	Ala	Tyr	Glu	Pro
			3220					3225					3230		
Ser	Leu	Val	Pro	Ser	Tyr	Tyr	Pro	Ser	Gly	Asp	Asn	Glu	Val	Glu	Ser
		3235					3240					3245			
Pro	Trp	Ser	Asn	Ala	Asp	Thr	Leu	Pro	Pro	Leu	Lys	Pro	Asp	Ile	Glu
	3250					3255					3260				
Ser	Thr	Leu	Pro	Pro	Thr	Thr	Pro	Thr	Thr	Thr	Thr	Thr	Thr	Thr	Thr
3265					3270					3275					3280
Thr	Thr	Thr	Ser	Thr	Thr	Thr	Thr	Ser	Thr	Thr	Thr	Thr	Thr	Thr	Thr
				3285					3290					3295	
Pro	Ser	Pro	Ile	Val	Ile	Asp	Glu	Glu	Lys	Glu	Ile	Glu	Ala	Lys	Thr
			3300					3305					3310		
Pro	Gln	Lys	Ile	Leu	Thr	Thr	Arg	Pro	Pro	Ala	Lys	Leu	Asn	Leu	Pro
		3315					3320					3325			
Ser	Asp	Glu	Arg	Cys	Lys	Leu	Pro	Glu	Gln	Pro	Asn	Phe	Asp	Val	Asp
	3330					3335					3340				
Phe	Thr	Glu	Ala	Gly	Tyr	Arg	Phe	Tyr	Gly	Leu	Arg	Glu	Gln	Arg	Leu
3345					3350					3355					3360
Gln	Ile	Asn	Ser	Leu	Pro	Val	Lys	Val	Arg	Arg	His	His	Asp	Ile	Gly
				3365					3370					3375	
Ile	Ser	Phe	Arg	Thr	Glu	Arg	Pro	Asn	Gly	Leu	Leu	Ile	Tyr	Ala	Gly
			3380					3385					3390		
Ser	Lys	Gln	Arg	Asp	Asp	Phe	Ile	Ala	Val	Tyr	Leu	Leu	Asp	Gly	Arg
		3395					3400					3405			
Val	Thr	Tyr	Glu	Ile	Arg	Val	Gly	Ala	Gln	Leu	Gln	Ala	Lys	Ile	Thr
	3410					3415					3420				
Thr	Glu	Ala	Glu	Leu	Asn	Asp	Gly	Thr	Trp	His	Thr	Val	Glu	Val	Val
3425					3430					3435					3440
Arg	Thr	Gln	Arg	Lys	Val	Ser	Leu	Leu	Ile	Asp	Lys	Leu	Glu	Gln	Pro
				3445					3450					3455	
Gly	Ser	Val	Asp	Leu	Asn	Ala	Glu	Arg	Ser	Ala	Pro	Val	Leu	Ala	Val
			3460					3465					3470		
Glu	Leu	Pro	Ile	Tyr	Leu	Gly	Gly	Val	Asn	Lys	Phe	Leu	Glu	Ser	Glu
		3475					3480					3485			

Val Lys Asn Leu Thr Asp Phe Lys Thr Glu Val Pro Tyr Phe Asn Gly
 3490 3495 3500
 Cys Leu Lys Asn Ile Lys Phe Asp Ala Met Asp Leu Glu Thr Pro Pro
 3505 3510 3515 3520
 Glu Glu Phe Gly Val Val Pro Cys Ser Glu Gln Val Glu Arg Gly Leu
 3525 3530 3535
 Phe Phe Asn Asn Gln Lys Ala Phe Val Lys Ile Phe Asp His Phe Asp
 3540 3545 3550
 Val Gly Thr Glu Met Lys Ile Ser Phe Asp Phe Arg Pro Arg Asp Pro
 3555 3560 3565
 Asn Gly Leu Leu Phe Ser Val His Gly Lys Asn Ser Tyr Ala Ile Leu
 3570 3575 3580
 Glu Leu Val Asp Asn Thr Leu Tyr Phe Thr Val Lys Thr Asp Leu Lys
 3585 3590 3595 3600
 Asn Ile Val Ser Thr Asn Tyr Lys Leu Pro Asn Asn Glu Ser Phe Cys
 3605 3610 3615
 Asp Gly Lys Thr Arg Asn Val Gln Ala Ile Lys Ser Lys Phe Val Ile
 3620 3625 3630
 Asn Ile Ala Val Asp Phe Ile Ser Ser Asn Pro Gly Val Gly Asn Glu
 3635 3640 3645
 Gly Ser Val Ile Thr Arg Thr Asn Arg Pro Leu Phe Leu Gly Gly His
 3650 3655 3660
 Val Ala Phe Gln Arg Ala Pro Gly Ile Lys Thr Lys Lys Ser Phe Lys
 3665 3670 3675 3680
 Gly Cys Ile Ser Lys Val Glu Val Asn Gln Arg Met Ile Asn Ile Thr
 3685 3690 3695
 Pro Asn Met Val Val Gly Asp Ile Trp Gln Gly Tyr Cys Pro Leu Asn
 3700 3705 3710

<210> 52
 <211> 239
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Laminin
 N-terminal domain Consensus Sequence

<400> 52
 Ala Gly Arg Pro Arg Arg Cys Tyr Pro Glu Phe Val Asn Leu Ala Phe

1	5	10	15
Gly Arg Pro Val Thr Ala Ser Ser Thr Cys Gly Glu Gln Gly Pro Glu	20	25	30
Arg Tyr Cys Lys Leu Val Gly Arg Thr Glu Gln Gly Lys Lys Cys Asp	35	40	45
Tyr Cys Asp Ala Arg Asp Pro Arg Arg Ser His Pro Ala Glu Asn Leu	50	55	60
Thr Asp Gly Asn Asn Pro Gly Asn Pro Thr Trp Trp Gln Ser Glu Pro	65	70	75
Leu Ser Asn Gly Pro Gln Asn Val Asn Leu Thr Leu Asp Leu Gly Lys	85	90	95
Glu Phe His Leu Thr Tyr Val Ile Leu Lys Phe Cys Ser Pro Arg Pro	100	105	110
Ser Leu Ala Ile Leu Glu Arg Ser Asp Phe Gly Lys Thr Trp Gln Pro	115	120	125
Tyr Gln Tyr Phe Ser Ser Asp Cys Arg Arg Thr Phe Gly Arg Pro Pro	130	135	140
Arg Gly Pro Ile Thr Lys Gly Asn Glu Gln Glu Val Leu Cys Thr Ser	145	150	155
Glu Tyr Ser Asp Ile Val Pro Leu Glu Gly Gly Glu Ile Ala Phe Ser	165	170	175
Thr Leu Glu Gly Arg Pro Ser Ala Thr Asp Phe Asp Asn Ser Pro Val	180	185	190
Leu Gln Glu Trp Val Thr Ala Thr Asn Ile Arg Val Arg Leu Thr Arg	195	200	205
Leu Asn Thr Leu Gly Asp Asp Leu Met Asp Lys Arg Asp Pro Glu Val	210	215	220
Thr Arg Ser Tyr Tyr Tyr Ala Ile Ser Asp Ile Ala Val Gly Gly	225	230	235

<210> 53
 <211> 237
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Laminin
 N-Terminal Domain Consensus Sequence

<400> 53
 Cys Tyr Pro Ala Thr Gly Asn Leu Ala Ile Gly Arg Ala Leu Ser Ala
 1 5 10 15

Thr Ser Thr Cys Gly Leu His Ser Pro Glu Pro Tyr Cys Ile Leu Ser
 20 25 30
 His Leu Gln Pro Arg Asp Lys Lys Cys Phe Leu Cys Asp Ser Asn Ser
 35 40 45
 Pro Asn Pro Arg Asn Ser His Pro Ile Ser Phe Leu Thr Asp Thr Phe
 50 55 60
 Asn Pro Gln Ser Pro Thr Trp Trp Gln Ser Glu Thr Met Gln Asn Gly
 65 70 75 80
 Val Gln Tyr Pro Asn Val Thr Ile Thr Leu Asp Leu Glu Ala Glu Phe
 85 90 95
 His Phe Thr Tyr Val Ile Ile Thr Phe Lys Thr Phe Arg Pro Ala Ala
 100 105 110
 Met Ile Tyr Glu Arg Ser Ser Asp Phe Gly Thr Trp Ile Pro Tyr Gln
 115 120 125
 Tyr Tyr Ala Tyr Asp Cys Glu Ala Thr Tyr Pro Gly Ile Pro Arg Arg
 130 135 140
 Pro Ile Arg Thr Gly Arg Ala Glu Asp Asp Val Leu Cys Thr Ser Arg
 145 150 155 160
 Tyr Ser Asp Ile Glu Pro Leu Thr Glu Gly Glu Val Ile Phe Ser Thr
 165 170 175
 Leu Glu Gly Arg Pro Ser Ala Asp Asn Phe Asp Pro Ser Pro Arg Leu
 180 185 190
 Gln Glu Trp Leu Lys Ala Thr Asn Ile Arg Ile Thr Leu Thr Arg Leu
 195 200 205
 His Thr Leu Gly Asp Asn Leu Leu Asp Ser Asp Pro Glu Val Leu Glu
 210 215 220
 Lys Tyr Tyr Tyr Ala Ile Ser Asp Ile Val Val Gly Gly
 225 230 235

<210> 54
 <211> 127
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Laminin B
 Domain Consensus Sequence

<400> 54
 Asp Asn Glu Pro Val Tyr Trp Val Ala Pro Glu Gln Phe Leu Gly Asp
 1 5 10 15

Lys Val Thr Ser Tyr Gly Gly Lys Leu Arg Tyr Thr Leu Ser Phe Asp
20 25 30

Gly Arg Glu Gly Gly Thr Thr Leu Ser Ala Pro Asp Val Ile Leu Glu
35 40 45

Gly Asn Gly Leu Arg Leu Ser His Pro Ala Gln Gly Pro Pro Leu Pro
50 55 60

Asp Glu Glu Thr Thr Asn Glu Val Arg Phe Arg Glu Glu Asn Trp Gln
65 70 75 80

Tyr Phe Gly Gly Arg Pro Val Thr Arg Glu Asp Leu Met Met Val Leu
85 90 95

Ala Asn Leu Thr Ala Ile Leu Ile Arg Ala Thr Tyr Ser Glu Gln Gln
100 105 110

Leu Ala Ser Arg Leu Ser Asp Val Ser Leu Glu Val Ala Val Pro
115 120 125

<210> 55

<211> 135

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Laminin B
domain Consensus Sequence

<400> 55

Tyr Trp Arg Leu Pro Glu Arg Phe Leu Gly Asp Gln Val Thr Ser Tyr
1 5 10 15

Gly Gly Lys Leu Lys Tyr Ser Val Ala Phe Asp Gly Val Gly Thr Ser
20 25 30

Asn Ser Glu Pro Asp Val Ile Leu Lys Gly Asn Gly Leu Arg Leu Ser
35 40 45

Val Pro Tyr Met Ala Gln Gly Asn Ser Tyr Pro Ser Glu Val Arg Val
50 55 60

Lys Tyr Thr Val Arg Leu His Glu Thr Phe Trp Asp Phe Gln Ser Gln
65 70 75 80

Pro Ala Val Thr Arg Glu Asp Phe Leu Ser Val Leu Ala Asn Leu Thr
85 90 95

Ala Ile Leu Ile Arg Ala Thr Tyr Ser Ala Gly Gln Ala Gln Ser Arg
100 105 110

Leu Asp Asp Val Ser Leu Glu Ile Ala Arg Pro Gly Ala Ala Gly Pro
115 120 125

Val Pro Ala Thr Trp Val Glu

130

135

<210> 56

<211> 135

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Laminin G
Domain Consensus Sequence

<400> 56

Thr	Arg	Leu	Ser	Ile	Ser	Phe	Ser	Phe	Arg	Thr	Thr	Ser	Pro	Asn	Gly
1				5					10					15	

Leu	Leu	Leu	Tyr	Ala	Gly	Ser	Lys	Gly	Gly	Gly	Asp	Phe	Leu	Ala	Leu
			20					25					30		

Glu	Leu	Arg	Asp	Gly	Arg	Leu	Val	Leu	Arg	Tyr	Asp	Leu	Gly	Ser	Gly
		35				40					45				

Pro	Ala	Arg	Leu	Thr	Ser	Asp	Pro	Thr	Pro	Leu	Asn	Asp	Gly	Gln	Trp
	50					55					60				

His	Arg	Val	Ser	Val	Glu	Arg	Asn	Gly	Arg	Arg	Val	Thr	Leu	Ser	Val
65					70				75						80

Asp	Gly	Gly	Asn	Arg	Val	Ser	Gly	Glu	Ser	Pro	Gly	Gly	Ser	Thr	Ile
			85					90					95		

Leu	Asp	Leu	Asp	Gly	Pro	Leu	Tyr	Leu	Gly	Gly	Leu	Pro	Glu	Asp	Leu
			100					105					110		

Lys	Leu	Pro	Gly	Leu	Pro	Val	Thr	Pro	Gly	Phe	Arg	Gly	Cys	Ile	Arg
		115				120						125			

Asn	Leu	Lys	Val	Asn	Gly	Lys
	130					135

<210> 57

<211> 49

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Laminin
EGF-like Consensus Sequence

<400> 57

Cys	Asp	Cys	Asn	Pro	His	Gly	Ser	Leu	Ser	Asp	Thr	Cys	Asp	Pro	Glu
1				5					10					15	

Thr	Gly	Gln	Cys	Leu	Cys	Lys	Pro	Gly	Val	Thr	Gly	Arg	Arg	Cys	Asp
		20						25					30		

Arg Cys Lys Pro Gly Tyr Tyr Gly Leu Pro Ser Asp Pro Gly Gln Gly
 35 40 45

Cys

<210> 58

<211> 47

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Laminin
 EGF-like Consensus Sequence

<400> 58

Cys Asp Cys Asp Pro Gly Gly Ser Ala Ser Thr Cys Asp Pro Glu Thr
 1 5 10 15

Gly Gln Cys Glu Cys Lys Pro Asn Thr Thr Gly Arg Arg Cys Asp Arg
 20 25 30

Cys Ala Pro Gly Tyr Tyr Gly Leu Pro Glu Ser Pro Pro Gly Cys
 35 40 45

<210> 59

<211> 860

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mysosin Tail
 Consensus Sequence

<400> 59

Glu Leu Glu Arg Gln Lys Arg Glu Leu Glu Asn Gln Leu Tyr Arg Lys
 1 5 10 15

Glu Ser Glu Leu Ser Gln Leu Ser Ser Lys Leu Glu Asp Glu Gln Ala
 20 25 30

Leu Val Ala Gln Leu Gln Lys Lys Ile Lys Glu Leu Glu Ala Arg Ile
 35 40 45

Arg Glu Leu Glu Glu Glu Leu Glu Ala Glu Arg Ala Ala Arg Ala Lys
 50 55 60

Ala Glu Lys Ala Arg Ala Asp Leu Ser Arg Glu Leu Glu Glu Leu Ser
 65 70 75 80

Glu Arg Leu Glu Glu Ala Gly Gly Ala Thr Ala Ala Gln Ile Glu Leu
 85 90 95

Asn Lys Lys Arg Glu Ala Glu Leu Ala Lys Leu Arg Lys Asp Leu Glu
 100 105 110

Glu Ala Asn Leu Gln His Glu Glu Ala Leu Ala Thr Leu Arg Lys Lys
 115 120 125
 His Gln Asp Ala Ile Asn Glu Leu Ser Glu Gln Ile Glu Gln Leu Gln
 130 135 140
 Lys Gln Lys Ala Lys Ala Glu Lys Glu Lys Ser Gln Leu Gln Ala Glu
 145 150 155 160
 Val Asp Asp Leu Leu Ala Gln Leu Asp Ser Ile Thr Lys Ala Lys Leu
 165 170 175
 Asn Ala Glu Lys Lys Ala Lys Gln Leu Glu Ser Gln Leu Ser Glu Leu
 180 185 190
 Gln Val Lys Leu Asp Glu Leu Gln Arg Gln Leu Asn Asp Leu Thr Ser
 195 200 205
 Gln Lys Ser Arg Leu Gln Ser Glu Asn Ser Asp Leu Thr Arg Gln Leu
 210 215 220
 Glu Glu Ala Glu Ala Gln Val Ser Asn Leu Ser Lys Leu Lys Ser Gln
 225 230 235 240
 Leu Glu Ser Gln Leu Glu Glu Ala Lys Arg Ser Leu Glu Glu Glu Ser
 245 250 255
 Arg Glu Arg Ala Asn Leu Gln Ala Gln Leu Arg Gln Leu Glu His Asp
 260 265 270
 Leu Asp Ser Leu Arg Glu Gln Leu Glu Glu Glu Ser Glu Ala Lys Ala
 275 280 285
 Glu Leu Glu Arg Gln Leu Ser Lys Ala Asn Ala Glu Ile Gln Gln Trp
 290 295 300
 Arg Ser Lys Phe Glu Ser Glu Gly Ala Leu Arg Ala Glu Glu Leu Glu
 305 310 315 320
 Glu Leu Lys Lys Lys Leu Asn Gln Lys Ile Ser Glu Leu Glu Glu Ala
 325 330 335
 Ala Glu Ala Ala Asn Ala Lys Cys Asp Ser Leu Glu Lys Thr Lys Ser
 340 345 350
 Arg Leu Gln Ser Glu Leu Glu Asp Leu Gln Ile Glu Leu Glu Arg Ala
 355 360 365
 Asn Ala Ala Ala Ser Glu Leu Glu Lys Lys Gln Lys Asn Phe Asp Lys
 370 375 380
 Ile Leu Ala Glu Trp Lys Arg Lys Val Asp Glu Leu Gln Ala Glu Leu
 385 390 395 400
 Asp Thr Ala Gln Arg Glu Ala Arg Asn Leu Ser Thr Glu Leu Phe Arg
 405 410 415

Leu Lys Asn Glu Leu Glu Glu Leu Lys Asp Gln Val Glu Ala Leu Arg
 420 425 430
 Arg Glu Asn Lys Asn Leu Gln Asp Glu Ile His Asp Leu Thr Asp Gln
 435 440 445
 Leu Gly Glu Gly Gly Arg Asn Val His Glu Leu Glu Lys Ala Arg Arg
 450 455 460
 Arg Leu Glu Ala Glu Lys Asp Glu Leu Gln Ala Ala Leu Glu Glu Ala
 465 470 475 480
 Glu Ala Ala Leu Glu Leu Glu Glu Ser Lys Val Leu Arg Ala Gln Val
 485 490 495
 Glu Leu Ser Gln Ile Arg Ser Glu Ile Glu Arg Arg Leu Ala Glu Lys
 500 505 510
 Glu Glu Glu Phe Glu Asn Thr Arg Lys Asn His Gln Arg Ala Ile Glu
 515 520 525
 Ser Leu Gln Ala Thr Leu Glu Ala Glu Thr Lys Gly Lys Ala Glu Ala
 530 535 540
 Ser Arg Leu Lys Lys Lys Leu Glu Gly Asp Ile Asn Glu Leu Glu Ile
 545 550 555 560
 Ala Leu Asp His Ala Asn Lys Ala Asn Ala Glu Ala Gln Lys Asn Val
 565 570 575
 Lys Lys Tyr Gln Gln Gln Val Lys Glu Leu Gln Thr Gln Val Glu Glu
 580 585 590
 Glu Gln Arg Ala Arg Glu Asp Ala Arg Glu Gln Leu Ala Val Ala Glu
 595 600 605
 Arg Arg Ala Thr Ala Leu Glu Ala Glu Leu Glu Glu Leu Arg Ser Ala
 610 615 620
 Leu Glu Gln Ala Glu Arg Ala Arg Lys Gln Ala Glu Thr Glu Leu Ala
 625 630 635 640
 Glu Ala Ser Glu Arg Val Asn Glu Leu Thr Ala Gln Asn Ser Ser Leu
 645 650 655
 Ile Ala Gln Lys Arg Lys Leu Glu Gly Glu Leu Ala Ala Leu Gln Ser
 660 665 670
 Asp Leu Asp Glu Ala Val Asn Glu Leu Lys Ala Ala Glu Glu Arg Ala
 675 680 685
 Lys Lys Ala Gln Ala Asp Ala Ala Arg Leu Ala Glu Glu Leu Arg Gln
 690 695 700
 Glu Gln Glu His Ser Gln His Leu Glu Arg Leu Arg Lys Gln Leu Glu
 705 710 715 720

Ser Gln Val Lys Glu Leu Gln Val Arg Leu Asp Glu Ala Glu Ala Ala
 725 730 735
 Ala Leu Lys Gly Gly Lys Lys Met Ile Gln Lys Leu Glu Ala Arg Val
 740 745 750
 Arg Glu Leu Glu Ala Glu Leu Asp Gly Glu Gln Arg Arg His Ala Glu
 755 760 765
 Thr Gln Lys Asn Leu Arg Lys Met Glu Arg Arg Val Lys Glu Leu Gln
 770 775 780
 Phe Gln Val Glu Glu Asp Lys Lys Asn Leu Glu Arg Leu Gln Asp Leu
 785 790 795 800
 Val Asp Lys Leu Gln Ala Lys Ile Lys Thr Tyr Lys Arg Gln Leu Glu
 805 810 815
 Glu Ala Glu Glu Val Ala Gln Ile Asn Leu Ser Lys Tyr Arg Lys Ala
 820 825 830
 Gln Arg Glu Leu Glu Asp Ala Glu Glu Arg Ala Asp Thr Ala Glu Arg
 835 840 845
 Ser Leu Asn Lys Leu Arg Ala Lys Ser Arg Arg Thr
 850 855 860

<210> 60

<211> 134

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Laiminin G
 domain Consensus Sequence

<400> 60

Phe Arg Thr Thr Glu Pro Ser Gly Leu Leu Leu Tyr Gly Gly Thr Asn
 1 5 10 15
 Thr Asp Arg Asp Phe Leu Ala Leu Glu Leu Arg Asp Gly Arg Leu Glu
 20 25 30
 Val Ser Tyr Asp Leu Gly Ser Gly Pro Ala Val Val Arg Ser Gly Asp
 35 40 45
 Arg Leu Asn Asp Gly Lys Trp His Arg Val Glu Leu Glu Arg Asn Gly
 50 55 60
 Arg Lys Gly Thr Leu Ser Val Asp Gly Glu Glu Ser Val Asp Gly Glu
 65 70 75 80
 Ser Pro Ser Gly Pro Asp Val Pro His Glu Asn Leu Asp Leu Asp Thr
 85 90 95

Pro Leu Tyr Val Gly Gly Leu Pro Glu Leu Ser Val Lys Arg Leu Leu
 100 105 110

Ala Ala Ile Ser Thr Ser Phe Lys Gly Cys Ile Arg Asp Val Ile Val
 115 120 125

Asn Gly Lys Pro Leu Asp
 130

<210> 61
 <211> 391
 <212> PRT
 <213> Homo sapiens

<400> 61
 Met Asp Ser Leu Gly Ala Val Ser Thr Arg Leu Gly Phe Asp Leu Phe
 1 5 10 15

Lys Glu Leu Lys Lys Thr Asn Asp Gly Asn Ile Phe Phe Ser Pro Val
 20 25 30

Gly Ile Leu Thr Ala Ile Gly Met Val Leu Leu Gly Thr Arg Gly Ala
 35 40 45

Thr Ala Ser Gln Leu Glu Glu Val Phe His Ser Glu Lys Glu Thr Lys
 50 55 60

Ser Ser Arg Ile Lys Ala Glu Glu Lys Glu Val Ile Glu Asn Thr Glu
 65 70 75 80

Ala Val His Gln Gln Phe Gln Lys Phe Leu Thr Glu Ile Ser Lys Leu
 85 90 95

Thr Asn Asp Tyr Glu Leu Asn Ile Thr Asn Arg Leu Phe Gly Glu Lys
 100 105 110

Thr Tyr Leu Phe Leu Gln Lys Tyr Leu Asp Tyr Val Glu Lys Tyr Tyr
 115 120 125

His Ala Ser Leu Glu Pro Val Asp Phe Val Asn Ala Ala Asp Glu Ser
 130 135 140

Arg Lys Lys Ile Asn Ser Trp Val Glu Ser Lys Thr Asn Glu Lys Ile
 145 150 155 160

Lys Asp Leu Phe Pro Asp Gly Ser Ile Ser Ser Ser Thr Lys Leu Val
 165 170 175

Leu Val Asn Met Val Tyr Phe Lys Gly Gln Trp Asp Arg Glu Phe Lys
 180 185 190

Lys Glu Asn Thr Lys Glu Glu Lys Phe Trp Met Asn Lys Ser Thr Ser
 195 200 205

Lys Ser Val Gln Met Met Thr Gln Ser His Ser Phe Ser Phe Thr Phe
 210 215 220

Leu Glu Asp Leu Gln Ala Lys Ile Leu Gly Ile Pro Tyr Lys Asn Asn
 225 230 235 240
 Asp Leu Ser Met Phe Val Leu Leu Pro Asn Asp Ile Asp Gly Leu Glu
 245 250 255
 Lys Ile Ile Asp Lys Ile Ser Pro Glu Lys Leu Val Glu Trp Thr Ser
 260 265 270
 Pro Gly His Met Glu Glu Arg Lys Val Asn Leu His Leu Pro Arg Phe
 275 280 285
 Glu Val Glu Asp Gly Tyr Asp Leu Glu Ala Val Leu Ala Ala Met Gly
 290 295 300
 Met Gly Asp Ala Phe Ser Glu His Lys Ala Asp Tyr Ser Gly Met Ser
 305 310 315 320
 Ser Gly Ser Gly Leu Tyr Ala Gln Lys Phe Leu His Ser Ser Phe Val
 325 330 335
 Ala Val Thr Glu Glu Gly Thr Glu Ala Ala Ala Thr Gly Ile Gly
 340 345 350
 Phe Thr Val Thr Ser Ala Pro Gly His Glu Asn Val His Cys Asn His
 355 360 365
 Pro Phe Leu Phe Phe Ile Arg His Asn Glu Ser Asn Ser Ile Leu Phe
 370 375 380
 Phe Gly Arg Phe Ser Ser Pro
 385 390

<210> 62
 <211> 390
 <212> PRT
 <213> Homo sapiens

<400> 62
 Met Asp Ser Leu Gly Ala Val Ser Thr Arg Leu Gly Phe Asp Leu Phe
 1 5 10 15
 Lys Glu Leu Lys Lys Thr Asn Asp Gly Asn Ile Phe Phe Ser Pro Val
 20 25 30
 Gly Ile Leu Thr Ala Ile Gly Met Val Leu Leu Gly Thr Arg Gly Ala
 35 40 45
 Thr Ala Ser Gln Leu Glu Glu Val Phe His Ser Glu Lys Glu Thr Lys
 50 55 60
 Ser Ser Arg Ile Lys Ala Glu Glu Lys Glu Ile Glu Asn Thr Glu Ala
 65 70 75 80
 Val His Gln Gln Phe Gln Lys Phe Leu Thr Glu Ile Ser Lys Leu Thr

385

390

<210> 63

<211> 391

<212> PRT

<213> Homo sapiens

<400> 63

Met Asp Ser Leu Gly Ala Val Ser Thr Arg Leu Gly Phe Asp Leu Phe
 1 5 10 15

Lys Glu Leu Lys Lys Thr Asn Asp Gly Asn Ile Phe Phe Ser Pro Val
 20 25 30

Gly Ile Leu Thr Ala Ile Gly Met Val Leu Leu Gly Thr Arg Gly Ala
 35 40 45

Thr Ala Ser Gln Leu Glu Glu Val Phe His Ser Glu Lys Glu Thr Lys
 50 55 60

Ser Ser Arg Ile Lys Ala Glu Glu Lys Glu Val Ile Glu Asn Thr Glu
 65 70 75 80

Ala Val His Gln Gln Phe Gln Lys Phe Leu Thr Glu Ile Ser Lys Leu
 85 90 95

Thr Asn Asp Tyr Glu Leu Asn Ile Thr Asn Arg Leu Phe Gly Glu Lys
 100 105 110

Thr Tyr Leu Phe Leu Gln Lys Tyr Leu Asp Tyr Val Glu Lys Tyr Tyr
 115 120 125

His Ala Ser Leu Glu Pro Val Asp Phe Val Asn Ala Ala Asp Glu Ser
 130 135 140

Arg Lys Lys Ile Asn Ser Trp Val Glu Ser Lys Thr Asn Glu Lys Ile
 145 150 155 160

Lys Asp Leu Phe Pro Asp Gly Ser Ile Ser Ser Ser Thr Lys Leu Val
 165 170 175

Leu Val Asn Met Val Tyr Phe Lys Gly Gln Trp Asp Arg Glu Phe Lys
 180 185 190

Lys Glu Asn Thr Lys Glu Glu Lys Phe Trp Met Asn Lys Ser Thr Ser
 195 200 205

Lys Ser Val Gln Met Met Thr Gln Ser His Ser Phe Ser Phe Thr Phe
 210 215 220

Leu Glu Asp Leu Gln Ala Lys Ile Leu Gly Ile Pro Tyr Lys Asn Asn
 225 230 235 240

Asp Leu Ser Met Phe Val Leu Leu Pro Asn Asp Ile Asp Gly Leu Glu
 245 250 255

Lys Ile Ile Asp Lys Ile Ser Pro Glu Lys Leu Val Glu Trp Thr Ser
 260 265 270
 Pro Gly His Met Glu Glu Arg Lys Val Asn Leu His Leu Pro Arg Phe
 275 280 285
 Glu Val Glu Asp Ser Tyr Asp Leu Glu Ala Val Leu Ala Ala Met Gly
 290 295 300
 Met Gly Asp Ala Phe Ser Glu His Lys Ala Asp Tyr Ser Gly Met Ser
 305 310 315 320
 Ser Gly Ser Gly Leu Tyr Ala Gln Lys Phe Leu His Ser Ser Phe Val
 325 330 335
 Ala Val Thr Glu Glu Gly Thr Glu Ala Ala Ala Ala Thr Gly Ile Gly
 340 345 350
 Phe Thr Val Thr Ser Ala Pro Gly His Glu Asn Val His Cys Asn His
 355 360 365
 Pro Phe Leu Phe Phe Ile Arg His Asn Glu Ser Asn Ser Ile Leu Phe
 370 375 380
 Phe Gly Arg Phe Ser Ser Pro
 385 390

<210> 64
 <211> 339
 <212> PRT
 <213> Homo sapiens

<400> 64
 Met Asp Ser Leu Gly Ala Val Asn Thr Arg Leu Gly Phe Asp Leu Phe
 1 5 10 15
 Lys Glu Leu Lys Lys Thr Asn Asp Gly Asn Ile Phe Phe Ser Pro Val
 20 25 30
 Gly Ile Leu Thr Ala Ile Gly Met Val Leu Leu Gly Thr Arg Gly Ala
 35 40 45
 Thr Ala Ser Gln Leu Glu Glu Val Phe His Ser Glu Lys Glu Thr Lys
 50 55 60
 Ser Ser Arg Ile Lys Ala Glu Glu Lys Glu Val Ile Glu Asn Thr Glu
 65 70 75 80
 Ala Val His Gln Gln Phe Gln Lys Phe Leu Thr Glu Ile Ser Lys Leu
 85 90 95
 Thr Asn Asp Tyr Glu Leu Asn Ile Thr Asn Arg Leu Phe Gly Glu Lys
 100 105 110
 Thr Tyr Leu Phe Leu Gln Lys Tyr Leu Asp Tyr Val Glu Lys Tyr Tyr
 115 120 125

His Ala Ser Leu Glu Pro Val Asp Phe Val Asn Ala Ala Asp Glu Ser
 130 135 140
 Arg Lys Lys Ile Asn Ser Trp Val Glu Ser Lys Thr Asn Glu Lys Ile
 145 150 155 160
 Lys Asp Leu Phe Pro Asp Gly Ser Ile Ser Ser Ser Thr Lys Leu Val
 165 170 175
 Leu Val Asn Met Val Tyr Phe Lys Gly Gln Trp Asp Arg Glu Phe Lys
 180 185 190
 Lys Glu Asn Thr Lys Glu Glu Lys Phe Trp Met Asn Lys Ile Ile Asp
 195 200 205
 Lys Ile Ser Pro Glu Lys Leu Val Glu Trp Thr Ser Pro Gly His Met
 210 215 220
 Glu Glu Arg Lys Val Asn Leu His Leu Pro Arg Phe Glu Val Glu Asp
 225 230 235 240
 Gly Tyr Asp Leu Glu Ala Val Leu Ala Ala Met Gly Met Gly Asp Ala
 245 250 255
 Phe Ser Glu His Lys Ala Asp Tyr Ser Gly Met Ser Ser Gly Ser Gly
 260 265 270
 Leu Tyr Ala Gln Lys Phe Leu His Ser Ser Phe Val Ala Val Thr Glu
 275 280 285
 Glu Gly Thr Glu Ala Ala Ala Ala Thr Gly Ile Gly Phe Thr Val Thr
 290 295 300
 Ser Ala Pro Gly His Glu Asn Val His Cys Asn His Pro Phe Leu Phe
 305 310 315 320
 Phe Ile Arg His Asn Glu Ser Asn Ser Ile Leu Phe Phe Gly Arg Phe
 325 330 335
 Ser Ser Pro

<210> 65
 <211> 390
 <212> PRT
 <213> Homo sapiens

<400> 65
 Met Asn Ser Leu Ser Glu Ala Asn Thr Lys Phe Met Phe Asp Leu Phe
 1 5 10 15
 Gln Gln Phe Arg Lys Ser Lys Glu Asn Asn Ile Phe Tyr Ser Pro Ile
 20 25 30
 Ser Ile Thr Ser Ala Leu Gly Met Val Leu Leu Gly Ala Lys Asp Asn

35					40					45					
Thr	Ala	Gln	Gln	Ile	Lys	Lys	Val	Leu	His	Phe	Asp	Gln	Val	Thr	Glu
	50					55					60				
Asn	Thr	Thr	Gly	Lys	Ala	Ala	Thr	Tyr	His	Val	Asp	Arg	Ser	Gly	Asn
	65					70					75				80
Val	His	His	Gln	Phe	Gln	Lys	Leu	Leu	Thr	Glu	Phe	Asn	Lys	Ser	Thr
				85					90					95	
Asp	Ala	Tyr	Glu	Leu	Lys	Ile	Ala	Asn	Lys	Leu	Phe	Gly	Glu	Lys	Thr
			100					105					110		
Tyr	Leu	Phe	Leu	Gln	Glu	Tyr	Leu	Asp	Ala	Ile	Lys	Lys	Phe	Tyr	Gln
		115					120					125			
Thr	Ser	Val	Glu	Ser	Val	Asp	Phe	Ala	Asn	Ala	Pro	Glu	Glu	Ser	Arg
		130				135					140				
Lys	Lys	Ile	Asn	Ser	Trp	Val	Glu	Ser	Gln	Thr	Asn	Glu	Lys	Ile	Lys
					150					155					160
Asn	Leu	Ile	Pro	Glu	Gly	Asn	Ile	Gly	Ser	Asn	Thr	Thr	Leu	Val	Leu
				165					170					175	
Val	Asn	Ala	Ile	Tyr	Phe	Lys	Gly	Gln	Trp	Glu	Lys	Lys	Phe	Asn	Lys
			180					185					190		
Glu	Asp	Thr	Lys	Glu	Glu	Lys	Phe	Trp	Pro	Asn	Lys	Asn	Thr	Tyr	Lys
		195					200					205			
Ser	Ile	Gln	Met	Met	Arg	Gln	Tyr	Thr	Ser	Phe	His	Phe	Ala	Ser	Leu
						215					220				
Glu	Asp	Val	Gln	Ala	Lys	Val	Leu	Glu	Ile	Pro	Tyr	Lys	Gly	Lys	Asp
					230					235					240
Leu	Ser	Met	Ile	Val	Leu	Leu	Pro	Asn	Glu	Ile	Asp	Gly	Leu	Gln	Lys
				245					250					255	
Leu	Glu	Glu	Lys	Leu	Thr	Ala	Glu	Lys	Leu	Met	Glu	Trp	Thr	Ser	Leu
			260					265					270		
Gln	Asn	Met	Arg	Glu	Thr	Arg	Val	Asp	Leu	His	Leu	Pro	Arg	Phe	Lys
			275				280					285			
Val	Glu	Glu	Ser	Tyr	Asp	Leu	Lys	Asp	Thr	Leu	Arg	Thr	Met	Gly	Met
					295						300				
Val	Asp	Ile	Phe	Asn	Gly	Asp	Ala	Asp	Leu	Ser	Gly	Met	Thr	Gly	Ser
					310				315						320
Arg	Gly	Leu	Val	Leu	Ser	Gly	Val	Leu	His	Lys	Ala	Phe	Val	Glu	Val
				325					330					335	
Thr	Glu	Glu	Gly	Ala	Glu	Ala	Ala	Ala	Ala	Thr	Ala	Val	Val	Gly	Phe

340 345 350
 Gly Ser Ser Pro Ala Ser Thr Asn Glu Glu Phe His Cys Asn His Pro
 355 360 365
 Phe Leu Phe Phe Ile Arg Gln Asn Lys Thr Asn Ser Ile Leu Phe Tyr
 370 375 380
 Gly Arg Phe Ser Ser Pro
 385 390

<210> 66
 <211> 377
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Serpin
 Consensus Sequence

<400> 66
 Asp Ser Ser Arg Ala Leu Lys Leu Ala Ser Ala Asn Ala Asp Phe Ala
 1 5 10 15
 Phe Ser Leu Tyr Lys Glu Leu Val Glu Gln Asn Pro Asp Lys Asn Ile
 20 25 30
 Phe Phe Ser Pro Val Ser Ile Ser Ser Ala Leu Ala Met Leu Ser Leu
 35 40 45
 Gly Ala Lys Gly Asn Thr Ala Thr Gln Ile Leu Glu Val Leu Gly Phe
 50 55 60
 Asn Leu Thr Glu Thr Ser Glu Ala Glu Ile His Gln Gly Phe Gln His
 65 70 75 80
 Leu Leu Gln Glu Leu Asn Arg Pro Asp Thr Gly Leu Gln Leu Thr Thr
 85 90 95
 Gly Asn Ala Leu Phe Val Asp Lys Ser Leu Lys Leu Leu Asp Glu Phe
 100 105 110
 Leu Glu Asp Ser Lys Arg Leu Tyr Gln Ser Glu Val Phe Ser Val Asp
 115 120 125
 Phe Ser Asp Pro Glu Glu Ala Lys Lys Gln Ile Asn Asp Trp Val Glu
 130 135 140
 Lys Lys Thr Gln Gly Lys Ile Lys Asp Leu Leu Lys Asp Leu Asp Ser
 145 150 155 160
 Asp Thr Val Leu Val Leu Val Asn Tyr Ile Tyr Phe Lys Gly Lys Trp
 165 170 175
 Lys Lys Pro Phe Asp Pro Glu Leu Thr Glu Glu Glu Asp Phe His Val
 180 185 190

Asp	Lys	Lys	Thr	Thr	Val	Lys	Val	Pro	Met	Met	Asn	Gln	Leu	Gly	Thr
	195						200					205			
Phe	Tyr	Tyr	Phe	Arg	Asp	Glu	Glu	Leu	Asn	Cys	Lys	Val	Leu	Glu	Leu
	210					215					220				
Pro	Tyr	Lys	Gly	Asn	Ala	Thr	Ser	Met	Leu	Phe	Ile	Leu	Pro	Asp	Glu
225					230					235					240
Val	Gly	Lys	Leu	Glu	Gln	Val	Glu	Ala	Ala	Leu	Ser	Pro	Glu	Thr	Leu
				245					250						255
Arg	Lys	Trp	Leu	Glu	Asn	Met	Glu	Pro	Arg	Glu	Val	Glu	Leu	Tyr	Leu
			260					265						270	
Pro	Lys	Phe	Ser	Ile	Glu	Gly	Thr	Tyr	Asp	Leu	Lys	Asp	Val	Leu	Ala
		275					280					285			
Lys	Leu	Gly	Ile	Thr	Asp	Leu	Phe	Ser	Asn	Gln	Ala	Asp	Leu	Ser	Gly
	290					295					300				
Ile	Ser	Glu	Asp	Glu	Asp	Leu	Lys	Val	Ser	Lys	Ala	Val	His	Lys	Ala
305					310					315					320
Val	Leu	Glu	Val	Asp	Glu	Glu	Gly	Thr	Glu	Ala	Ala	Ala	Ala	Thr	Gly
				325					330						335
Ala	Ile	Ile	Val	Pro	Arg	Ser	Leu	Pro	Pro	Glu	Leu	Glu	Phe	Thr	Ala
			340					345					350		
Asp	Arg	Pro	Phe	Leu	Phe	Leu	Ile	Tyr	Asp	Asp	Pro	Thr	Gly	Ser	Ile
		355					360					365			
Leu	Phe	Met	Gly	Lys	Val	Val	Asn	Pro							
	370					375									

<210> 67

<211> 360

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Serpin
Consensus Sequence

<400> 67

Phe	Asp	Leu	Tyr	Lys	Glu	Leu	Ala	Lys	Glu	Ser	Pro	Asp	Lys	Asn	Ile
1				5					10					15	
Phe	Phe	Ser	Pro	Val	Ser	Ile	Ser	Ser	Ala	Leu	Ala	Met	Leu	Ser	Leu
			20					25					30		
Gly	Ala	Lys	Gly	Ser	Thr	Ala	Thr	Gln	Ile	Leu	Glu	Val	Leu	Gly	Phe
		35					40					45			

Phe Met Gly Lys Val Val Asn Pro
 355 360

<210> 68
 <211> 1697
 <212> PRT
 <213> Homo sapiens

<400> 68
 Ile Arg His Glu Val Phe Leu Ser Arg Ser Tyr Gln Arg Leu Ala Asp
 1 5 10 15
 Ala Cys Arg Gly Leu Leu Ala Leu Leu Phe Pro Leu Arg Tyr Ser Phe
 20 25 30
 Thr Tyr Val Pro Ile Leu Pro Ala Gln Leu Leu Glu Val Leu Ser Thr
 35 40 45
 Pro Thr Pro Phe Ile Ile Gly Val Asn Ala Ala Phe Gln Ala Glu Thr
 50 55 60
 Gln Glu Leu Leu Asp Val Ile Val Ala Asp Leu Asp Gly Gly Thr Val
 65 70 75 80
 Thr Ile Pro Glu Cys Val His Ile Pro Pro Leu Pro Glu Pro Leu Gln
 85 90 95
 Ser Gln Thr His Ser Val Leu Ser Met Val Leu Asp Pro Glu Leu Glu
 100 105 110
 Leu Ala Asp Leu Ala Phe Pro Pro Pro Thr Thr Ser Thr Ser Ser Leu
 115 120 125
 Lys Met Gln Asp Lys Glu Leu Arg Ala Val Phe Leu Arg Leu Phe Ala
 130 135 140
 Gln Leu Leu Gln Gly Tyr Arg Trp Cys Leu His Val Val Arg Ile His
 145 150 155 160
 Pro Glu Pro Val Ile Arg Phe His Lys Ala Ala Phe Leu Gly Gln Arg
 165 170 175
 Gly Leu Val Glu Asp Asp Phe Leu Met Lys Val Leu Glu Gly Met Ala
 180 185 190
 Phe Ala Gly Phe Val Ser Glu Arg Gly Val Pro Tyr Arg Pro Thr Asp
 195 200 205
 Leu Phe Asp Glu Leu Val Ala His Glu Val Ala Arg Met Arg Ala Asp
 210 215 220
 Glu Asn His Pro Gln Arg Val Leu Arg His Val Gln Glu Leu Ala Glu
 225 230 235 240
 Gln Leu Tyr Lys Asn Glu Asn Pro Tyr Pro Ala Val Ala Met His Lys
 245 250 255

Val	Gln	Arg	Pro	Gly	Glu	Ser	Ser	His	Leu	Arg	Arg	Val	Pro	Arg	Pro	260	265	270
Phe	Pro	Arg	Leu	Asp	Glu	Gly	Thr	Val	Gln	Trp	Ile	Val	Asp	Gln	Ala	275	280	285
Ala	Ala	Lys	Met	Gln	Gly	Ala	Pro	Pro	Ala	Val	Lys	Ala	Glu	Arg	Arg	290	295	300
Thr	Thr	Val	Pro	Ser	Gly	Pro	Pro	Met	Thr	Ala	Ile	Leu	Glu	Arg	Cys	305	310	315
Ser	Gly	Leu	His	Val	Asn	Ser	Ala	Arg	Arg	Leu	Glu	Val	Val	Arg	Asn	325	330	335
Cys	Ile	Ser	Tyr	Val	Phe	Glu	Gly	Lys	Met	Leu	Glu	Ala	Lys	Lys	Leu	340	345	350
Leu	Pro	Ala	Val	Leu	Arg	Ala	Leu	Lys	Gly	Arg	Val	Ala	Arg	Arg	Cys	355	360	365
Leu	Ala	Gln	Glu	Leu	His	Leu	His	Val	Gln	Gln	Asn	Arg	Ala	Val	Leu	370	375	380
Asp	His	Gln	Gln	Phe	Asp	Phe	Val	Val	Arg	Met	Met	Asn	Cys	Cys	Leu	385	390	395
Gln	Asp	Cys	Thr	Ser	Leu	Asp	Glu	His	Gly	Ile	Ala	Ala	Ala	Leu	Leu	405	410	415
Pro	Leu	Val	Thr	Ala	Phe	Cys	Arg	Lys	Leu	Ser	Pro	Gly	Val	Thr	Gln	420	425	430
Phe	Ala	Tyr	Ser	Cys	Val	Gln	Glu	His	Val	Val	Trp	Ser	Thr	Pro	Gln	435	440	445
Phe	Trp	Glu	Ala	Met	Phe	Tyr	Gly	Asp	Val	Gln	Thr	His	Ile	Arg	Ala	450	455	460
Leu	Tyr	Leu	Glu	Pro	Thr	Glu	Asp	Leu	Ala	Pro	Ala	Gln	Glu	Val	Gly	465	470	475
Glu	Ala	Pro	Ser	Gln	Glu	Asp	Glu	Arg	Ser	Ala	Leu	Asp	Val	Ala	Ser	485	490	495
Glu	Gln	Arg	Arg	Leu	Trp	Pro	Thr	Leu	Ser	Arg	Glu	Lys	Gln	Gln	Glu	500	505	510
Leu	Val	Gln	Lys	Glu	Glu	Ser	Thr	Val	Phe	Ser	Gln	Ala	Ile	His	Tyr	515	520	525
Ala	Asn	Arg	Met	Ser	Tyr	Leu	Leu	Leu	Pro	Leu	Asp	Ser	Ser	Lys	Ser	530	535	540
Arg	Leu	Leu	Arg	Glu	Arg	Ala	Gly	Leu	Gly	Asp	Leu	Glu	Ser	Ala	Ser	545	550	555

Asn	Ser	Leu	Val	Thr	Asn	Ser	Met	Ala	Gly	Ser	Val	Ala	Glu	Ser	Tyr		
				565					570					575			
Asp	Thr	Glu	Ser	Gly	Phe	Glu	Asp	Ala	Glu	Thr	Cys	Asp	Val	Ala	Gly		
			580					585					590				
Ala	Val	Val	Arg	Phe	Ile	Asn	Arg	Phe	Val	Asp	Lys	Val	Cys	Thr	Glu		
		595					600					605					
Ser	Gly	Val	Thr	Ser	Asp	His	Leu	Lys	Gly	Leu	His	Val	Met	Val	Pro		
	610					615					620						
Asp	Ile	Val	Gln	Met	His	Ile	Glu	Thr	Leu	Glu	Ala	Val	Gln	Arg	Glu		
625					630					635					640		
Ser	Arg	Arg	Leu	Pro	Pro	Ile	Gln	Lys	Pro	Lys	Leu	Leu	Arg	Pro	Arg		
				645					650					655			
Leu	Leu	Pro	Gly	Glu	Glu	Cys	Val	Leu	Asp	Gly	Leu	Arg	Val	Tyr	Leu		
			660					665					670				
Leu	Pro	Asp	Gly	Arg	Glu	Glu	Gly	Ala	Gly	Gly	Ser	Ala	Gly	Gly	Pro		
		675					680					685					
Ala	Leu	Leu	Pro	Ala	Glu	Gly	Ala	Val	Phe	Leu	Thr	Thr	Tyr	Arg	Val		
	690					695					700						
Ile	Phe	Thr	Gly	Met	Pro	Thr	Asp	Pro	Leu	Val	Gly	Glu	Gln	Val	Val		
705					710					715					720		
Val	Arg	Ser	Phe	Pro	Val	Ala	Ala	Leu	Thr	Lys	Glu	Lys	Arg	Ile	Ser		
				725					730					735			
Val	Gln	Thr	Pro	Val	Asp	Gln	Leu	Leu	Gln	Asp	Gly	Leu	Gln	Leu	Arg		
			740					745					750				
Ser	Cys	Thr	Phe	Gln	Leu	Leu	Lys	Met	Ala	Phe	Asp	Glu	Glu	Val	Gly		
		755					760					765					
Ser	Asp	Ser	Ala	Glu	Leu	Phe	Arg	Lys	Gln	Leu	His	Lys	Leu	Arg	Tyr		
	770					775					780						
Pro	Pro	Asp	Ile	Arg	Ala	Thr	Phe	Ala	Phe	Thr	Leu	Gly	Ser	Ala	His		
785					790					795					800		
Thr	Pro	Gly	Arg	Pro	Pro	Arg	Val	Thr	Lys	Asp	Lys	Gly	Pro	Ser	Leu		
				805					810					815			
Arg	Thr	Leu	Ser	Arg	Asn	Leu	Val	Lys	Asn	Ala	Lys	Lys	Thr	Ile	Gly		
			820					825					830				
Arg	Gln	His	Val	Thr	Arg	Lys	Lys	Tyr	Asn	Pro	Pro	Ser	Trp	Glu	His		
		835					840					845					
Arg	Gly	Gln	Pro	Pro	Pro	Glu	Asp	Gln	Glu	Asp	Glu	Ile	Ser	Val	Ser		
	850					855					860						

Glu Glu Leu Glu Pro Ser Thr Leu Thr Pro Ser Ser Ala Leu Lys Pro
 865 870 875 880
 Ser Asp Arg Met Thr Met Ser Ser Leu Val Glu Arg Ala Cys Cys Arg
 885 890 895
 Asp Tyr Gln Arg Leu Gly Leu Gly Thr Leu Ser Ser Ser Leu Ser Arg
 900 905 910
 Ala Lys Ser Glu Pro Phe Arg Ile Ser Pro Val Asn Arg Met Tyr Ala
 915 920 925
 Ile Cys Arg Ser Tyr Pro Gly Leu Leu Ile Val Arg Gln Ser Val Gln
 930 935 940
 Asp Asn Ala Leu Gln Arg Val Ser Arg Cys Tyr Arg Gln Asn Arg Phe
 945 950 955 960
 Pro Val Val Cys Trp Arg Ser Gly Arg Ser Lys Ala Val Leu Leu Arg
 965 970 975
 Ser Gly Gly Leu His Gly Lys Gly Val Val Gly Leu Phe Lys Ala Gln
 980 985 990
 Asn Ala Pro Ser Pro Gly Gln Ser Gln Ala Asp Ser Ser Ser Leu Glu
 995 1000 1005
 Gln Glu Lys Tyr Leu Gln Ala Val Val Ser Ser Met Pro Arg Tyr Ala
 1010 1015 1020
 Asp Ala Ser Gly Arg Asn Thr Leu Ser Gly Phe Ser Ser Ala His Met
 1025 1030 1035 1040
 Gly Ser His Gly Lys Trp Gly Ser Val Arg Thr Ser Gly Arg Ser Ser
 1045 1050 1055
 Gly Leu Gly Thr Asp Val Gly Ser Arg Leu Ala Gly Arg Asp Ala Leu
 1060 1065 1070
 Ala Pro Pro Gln Ala Asn Gly Gly Pro Pro Asp Pro Gly Phe Leu Arg
 1075 1080 1085
 Pro Gln Arg Ala Ala Leu Tyr Ile Leu Gly Asp Lys Ala Gln Leu Lys
 1090 1095 1100
 Gly Val Arg Ser Asp Pro Leu Gln Gln Trp Glu Leu Val Pro Ile Glu
 1105 1110 1115 1120
 Val Phe Glu Ala Arg Gln Val Lys Ala Ser Phe Lys Lys Leu Leu Lys
 1125 1130 1135
 Ala Cys Val Pro Gly Cys Pro Ala Ala Glu Pro Ser Pro Ala Ser Phe
 1140 1145 1150
 Leu Arg Ser Leu Glu Asp Ser Glu Trp Leu Ile Gln Ile His Lys Leu
 1155 1160 1165

Leu Gln Val Ser Val Leu Val Val Glu Leu Leu Asp Ser Gly Ser Ser
 1170 1175 1180

Val Leu Val Gly Leu Glu Asp Gly Trp Asp Ile Thr Thr Gln Val Val
 1185 1190 1195 1200

Ser Leu Val Gln Leu Leu Ser Asp Pro Phe Tyr Arg Thr Leu Glu Gly
 1205 1210 1215

Phe Arg Leu Leu Val Glu Lys Glu Trp Leu Ser Phe Gly His Arg Phe
 1220 1225 1230

Ser His Arg Gly Ala His Thr Leu Ala Gly Gln Ser Ser Gly Phe Thr
 1235 1240 1245

Pro Val Phe Leu Gln Phe Leu Asp Cys Val His Gln Val His Leu Gln
 1250 1255 1260

Phe Pro Met Glu Phe Glu Phe Ser Gln Phe Tyr Leu Lys Phe Leu Gly
 1265 1270 1275 1280

Tyr His His Val Ser Arg Arg Phe Arg Thr Phe Leu Leu Asp Ser Asp
 1285 1290 1295

Tyr Glu Arg Ile Glu Leu Gly Leu Leu Tyr Glu Glu Lys Gly Glu Arg
 1300 1305 1310

Arg Gly Gln Val Pro Cys Arg Ser Val Trp Glu Tyr Val Asp Arg Leu
 1315 1320 1325

Ser Lys Arg Thr Pro Val Phe His Asn Tyr Met Tyr Ala Pro Glu Asp
 1330 1335 1340

Ala Glu Val Leu Arg Pro Tyr Ser Asn Val Ser Asn Leu Lys Val Trp
 1345 1350 1355 1360

Asp Phe Tyr Thr Glu Glu Thr Leu Ala Glu Ala Leu Pro Met Thr Gly
 1365 1370 1375

Asn Trp Pro Arg Gly Pro Leu Asn Pro Gln Arg Lys Asn Gly Leu Met
 1380 1385 1390

Glu Ala Ser Pro Glu Gln Arg Arg Val Val Trp Pro Cys Tyr Asp Ser
 1395 1400 1405

Cys Pro Arg Ala Gln Pro Asp Ala Ile Ser Arg Leu Leu Glu Glu Leu
 1410 1415 1420

Gln Arg Leu Glu Thr Glu Leu Gly Gln Pro Ala Glu Arg Trp Lys Asp
 1425 1430 1435 1440

Thr Trp Asp Arg Val Lys Ala Ala Gln Arg Leu Glu Gly Arg Pro Asp
 1445 1450 1455

Gly Arg Gly Thr Pro Ser Ser Leu Leu Val Ser Thr Ala Pro His His
 1460 1465 1470

Arg Arg Ser Leu Gly Val Tyr Leu Gln Glu Gly Pro Val Gly Ser Thr
 1475 1480 1485
 Leu Ser Leu Ser Leu Asp Ser Asp Gln Ser Ser Gly Ser Thr Thr Ser
 1490 1495 1500
 Gly Ser Arg Gln Ala Ala Arg Arg Ser Thr Ser Thr Leu Tyr Ser Gln
 1505 1510 1515 1520
 Phe Gln Thr Ala Glu Ser Glu Asn Arg Ser Tyr Glu Gly Thr Leu Tyr
 1525 1530 1535
 Lys Lys Gly Ala Phe Met Lys Pro Trp Lys Ala Arg Trp Phe Val Leu
 1540 1545 1550
 Asp Lys Thr Lys His Gln Leu Arg Tyr Tyr Asp His Arg Val Asp Thr
 1555 1560 1565
 Glu Cys Lys Gly Val Ile Asp Leu Ala Glu Val Glu Ala Val Ala Pro
 1570 1575 1580
 Gly Thr Pro Thr Met Gly Ala Pro Lys Thr Val Asp Glu Lys Ala Phe
 1585 1590 1595 1600
 Phe Asp Val Lys Thr Thr Arg Arg Val Tyr Asn Phe Cys Ala Gln Asp
 1605 1610 1615
 Val Pro Ser Ala Gln Gln Trp Val Asp Arg Ile Gln Ser Cys Cys Arg
 1620 1625 1630
 Thr Pro Glu Pro Pro Ser Pro Ala Arg Leu Leu Cys Ser Arg Tyr Arg
 1635 1640 1645
 Pro Leu Gly Val Ala Gly Pro Pro Arg Pro Cys Leu Gln Pro Arg Pro
 1650 1655 1660
 Ser Thr Val Leu Ser Pro Glu Pro Pro Ala Leu Val Cys Thr Ala Pro
 1665 1670 1675 1680
 Val Pro Ala Pro Pro Arg Pro Ala Gly Pro Asn Leu Phe Trp Arg His
 1685 1690 1695

Ser

<210> 69
 <211> 552
 <212> PRT
 <213> Homo sapiens

<400> 69
 Asp Leu Phe Phe Lys Tyr Thr Trp Asn Asn Phe Leu His Phe Gln Val
 1 5 10 15

Glu Leu Cys Ile Ala Ala Ile Leu Ser His Ala Ala Arg Glu Glu Arg

20					25					30					
Thr	Glu	Ala	Ser	Gly	Ser	Glu	Ser	Arg	Val	Glu	Pro	Pro	His	Glu	Asn
		35					40					45			
Gly	Asn	Arg	Ser	Leu	Glu	Thr	Pro	Gln	Pro	Ala	Ala	Ser	Leu	Pro	Asp
	50					55					60				
Asn	Thr	Met	Val	Thr	His	Leu	Phe	Gln	Lys	Cys	Cys	Leu	Val	Gln	Arg
65					70					75					80
Ile	Leu	Glu	Ala	Trp	Glu	Ala	Asn	Asp	His	Thr	Gln	Ala	Ala	Gly	Gly
				85					90					95	
Met	Arg	Arg	Gly	Asn	Met	Gly	His	Leu	Thr	Arg	Ile	Ala	Asn	Ala	Val
			100					105					110		
Val	Gln	Asn	Leu	Glu	Arg	Gly	Pro	Val	Gln	Thr	His	Ile	Ser	Glu	Val
		115					120					125			
Ile	Arg	Gly	Leu	Pro	Ala	Asp	Cys	Arg	Gly	Arg	Trp	Glu	Ser	Phe	Val
	130					135					140				
Glu	Glu	Thr	Leu	Thr	Glu	Thr	Asn	Arg	Arg	Asn	Thr	Val	Asp	Leu	Ala
145					150					155					160
Phe	Ser	Asp	Tyr	Gln	Ile	Gln	Gln	Met	Thr	Ala	Asn	Phe	Val	Asp	Gln
				165					170					175	
Phe	Gly	Phe	Asn	Asp	Glu	Glu	Phe	Ala	Asp	Gln	Asp	Asp	Asn	Ile	Asn
			180					185					190		
Ala	Pro	Phe	Asp	Arg	Ile	Ala	Glu	Ile	Asn	Phe	Asn	Ile	Asp	Ala	Asp
		195					200					205			
Glu	Asp	Ser	Pro	Ser	Ala	Ala	Leu	Phe	Glu	Ala	Cys	Cys	Ser	Asp	Arg
	210					215					220				
Ile	Gln	Pro	Phe	Asp	Asp	Asp	Glu	Asp	Glu	Asp	Ile	Trp	Glu	Asp	Ser
225					230					235					240
Asp	Thr	Arg	Cys	Ala	Ala	Arg	Val	Met	Ala	Arg	Pro	Arg	Phe	Gly	Ala
				245					250					255	
Pro	His	Ala	Ser	Glu	Ser	Cys	Ser	Lys	Asn	Gly	Pro	Glu	Arg	Gly	Gly
			260					265					270		
Gln	Asp	Gly	Lys	Ala	Ser	Leu	Glu	Ala	His	Arg	Asp	Ala	Pro	Gly	Ala
	275						280					285			
Gly	Ala	Pro	Pro	Ala	Pro	Gly	Lys	Lys	Glu	Ala	Pro	Pro	Val	Glu	Gly
	290					295					300				
Asp	Ser	Glu	Ala	Gly	Ala	Met	Trp	Thr	Ala	Val	Phe	Asp	Glu	Pro	Ala
305					310					315					320
Asn	Ser	Thr	Pro	Thr	Ala	Pro	Gly	Val	Val	Arg	Asp	Val	Gly	Ser	Ser

	325		330		335
Val Trp Ala	Ala Gly Thr Ser Ala Pro	Glu Glu Lys Gly Trp Ala Lys			
	340	345	350		
Phe Thr Asp	Phe Gln Pro Phe Cys Cys Ser	Glu Ser Gly Pro Arg Cys			
	355	360	365		
Ser Ser Pro	Val Asp Thr Glu Cys Ser His Ala	Glu Gly Ser Arg Ser			
	370	375	380		
Gln Gly Pro	Glu Lys Ala Phe Ser Pro Ala Ser	Pro Cys Ala Trp Asn			
	385	390	395	400	
Val Cys Val	Thr Arg Lys Ala Pro Leu Leu	Ala Ser Asp Ser Ser Ser			
	405	410	415		
Ser Gly Gly	Ser His Ser Glu Asp Gly Asp	Gln Lys Ala Ala Ser Ala			
	420	425	430		
Met Asp Ala	Val Ser Arg Gly Pro Gly Arg	Glu Ala Pro Pro Leu Pro			
	435	440	445		
Thr Val Ala	Arg Thr Glu Glu Ala Val Gly	Arg Val Gly Cys Ala Asp			
	450	455	460		
Ser Arg Leu	Leu Ser Pro Ala Cys Pro Ala	Pro Lys Glu Val Thr Ala			
	465	470	475	480	
Ala Pro Ala	Val Ala Val Pro Pro Glu Ala	Thr Val Ala Ile Thr Thr			
	485	490	495		
Ala Leu Ser	Lys Ala Gly Pro Ala Ile Pro	Thr Pro Ala Val Ser Ser			
	500	505	510		
Ala Leu Ala	Val Ala Val Pro Leu Gly Pro	Ile Met Ala Val Thr Ala			
	515	520	525		
Ala Pro Ala	Met Val Ala Thr Leu Gly Thr	Val Thr Lys Asp Gly Gln			
	530	535	540		
Met Pro Arg	Gln Lys Glu Leu Pro				
	545	550			

<210> 70
 <211> 1327
 <212> PRT
 <213> Homo sapiens

<400> 70
 Met Ser Ala Pro Ser Ser Ser Pro Arg Ala Ala Glu Pro Ala Arg Ala
 1 5 10 15
 Pro Arg Ala Ala Pro Arg Pro Ser Pro Trp Arg Gly Ser Arg Thr Thr
 20 25 30

Ser Cys Trp Trp Arg Ser Gly Arg Thr Arg Ala Gly Ser Gly Glu Gly
 35 40 45
 Gln Gly Gln Ile Leu Gln Arg Phe Pro Glu Lys Asp Trp Glu Asp Asn
 50 55 60
 Pro Phe Pro Gln Gly Ile Glu Leu Phe Cys Gln Pro Ser Gly Trp Gln
 65 70 75 80
 Leu Cys Pro Glu Arg Asn Pro Pro Thr Phe Phe Val Ala Val Leu Thr
 85 90 95
 Asp Ile Asn Ser Glu Arg His Tyr Cys Ala Cys Leu Thr Phe Trp Glu
 100 105 110
 Pro Ala Glu Pro Ser Gln Glu Thr Thr Arg Val Glu Asp Ala Thr Glu
 115 120 125
 Arg Glu Glu Glu Gly Asp Glu Gly Gly Gln Thr His Leu Ser Pro Thr
 130 135 140
 Ala Pro Ala Pro Ser Ala Gln Leu Phe Ala Pro Lys Thr Leu Val Leu
 145 150 155 160
 Val Ser Arg Leu Asp His Thr Glu Val Phe Arg Asn Ser Leu Gly Leu
 165 170 175
 Ile Tyr Ala Ile His Val Glu Gly Leu Asn Val Cys Leu Glu Asn Val
 180 185 190
 Ile Gly Asn Leu Leu Thr Cys Thr Val Pro Leu Ala Gly Gly Ser Gln
 195 200 205
 Arg Thr Ile Ser Leu Gly Ala Gly Asp Arg Gln Val Ile Gln Thr Pro
 210 215 220
 Leu Ala Asp Ser Leu Pro Val Ser Arg Cys Ser Val Ala Leu Leu Phe
 225 230 235 240
 Arg Gln Leu Gly Ile Thr Asn Val Leu Ser Leu Phe Cys Ala Ala Leu
 245 250 255
 Thr Glu His Lys Val Leu Phe Leu Ser Arg Ser Tyr Gln Arg Leu Ala
 260 265 270
 Asp Ala Cys Arg Gly Leu Leu Ala Leu Leu Phe Pro Leu Arg Tyr Ser
 275 280 285
 Phe Thr Tyr Val Pro Ile Leu Pro Ala Gln Leu Leu Glu Val Leu Ser
 290 295 300
 Thr Pro Thr Pro Phe Ile Ile Gly Val Asn Ala Ala Phe Gln Ala Glu
 305 310 315 320
 Thr Gln Glu Leu Leu Asp Val Ile Val Ala Asp Leu Asp Gly Gly Thr
 325 330 335

Val Thr Ile Pro Glu Cys Val His Ile Pro Pro Leu Pro Glu Pro Leu
340 345 350
Gln Ser Gln Thr His Ser Val Leu Ser Met Val Leu Asp Pro Glu Leu
355 360 365
Glu Leu Ala Asp Leu Ala Phe Pro Pro Pro Thr Thr Ser Thr Ser Ser
370 375 380
Leu Lys Met Gln Asp Lys Glu Leu Arg Ala Val Phe Leu Arg Leu Phe
385 390 395 400
Ala Gln Leu Leu Gln Gly Tyr Arg Trp Cys Leu His Val Val Arg Ile
405 410 415
His Pro Glu Pro Val Ile Arg Phe His Lys Ala Ala Phe Leu Gly Gln
420 425 430
Arg Gly Leu Val Glu Asp Asp Phe Leu Met Lys Val Leu Glu Gly Met
435 440 445
Ala Phe Ala Gly Phe Val Ser Glu Arg Gly Val Pro Tyr Arg Pro Thr
450 455 460
Asp Leu Phe Asp Glu Leu Val Ala His Glu Val Ala Arg Met Arg Ala
465 470 475 480
Asp Glu Asn His Pro Gln Arg Val Leu Arg His Val Gln Glu Leu Ala
485 490 495
Glu Gln Leu Tyr Lys Asn Glu Asn Pro Tyr Pro Ala Val Ala Met His
500 505 510
Lys Val Gln Arg Pro Gly Glu Ser Ser His Leu Arg Arg Val Pro Arg
515 520 525
Pro Phe Pro Arg Leu Asp Glu Gly Thr Val Gln Trp Ile Val Asp Gln
530 535 540
Ala Ala Ala Lys Met Gln Gly Ala Pro Pro Ala Val Lys Ala Glu Arg
545 550 555 560
Arg Thr Thr Val Pro Ser Gly Pro Pro Met Thr Ala Ile Leu Glu Arg
565 570 575
Cys Ser Gly Leu His Val Asn Ser Ala Arg Arg Leu Glu Val Val Arg
580 585 590
Asn Cys Ile Ser Tyr Val Phe Glu Gly Lys Met Leu Glu Ala Lys Lys
595 600 605
Leu Leu Pro Ala Val Leu Arg Ala Leu Lys Gly Arg Ala Ala Arg Arg
610 615 620
Cys Leu Ala Gln Glu Leu His Leu His Val Gln Gln Asn Arg Ala Val
625 630 635 640

Leu Asp His Gln Gln Phe Asp Phe Val Val Arg Met Met Asn Cys Cys
 645 650 655
 Leu Gln Asp Cys Thr Ser Leu Asp Glu His Gly Ile Ala Ala Ala Leu
 660 665 670
 Leu Pro Leu Val Thr Ala Phe Cys Arg Lys Leu Ser Pro Gly Val Thr
 675 680 685
 Gln Phe Ala Tyr Ser Cys Val Gln Glu His Val Val Trp Ser Thr Pro
 690 695 700
 Gln Phe Trp Glu Ala Met Phe Tyr Gly Asp Val Gln Thr His Ile Arg
 705 710 715 720
 Ala Leu Tyr Leu Glu Pro Thr Glu Asp Leu Ala Pro Ala Gln Glu Val
 725 730 735
 Gly Glu Ala Pro Ser Gln Glu Asp Glu Arg Ser Ala Leu Asp Val Ala
 740 745 750
 Ser Glu Gln Arg Arg Leu Trp Pro Thr Leu Ser Arg Glu Lys Gln Gln
 755 760 765
 Glu Leu Val Gln Lys Glu Glu Ser Thr Val Phe Ser Gln Ala Ile His
 770 775 780
 Tyr Ala Asn Arg Met Ser Tyr Leu Leu Leu Pro Leu Asp Ser Ser Lys
 785 790 795 800
 Ser Arg Leu Leu Arg Glu Arg Ala Gly Leu Gly Asp Leu Glu Ser Ala
 805 810 815
 Ser Asn Ser Leu Val Thr Asn Ser Met Ala Gly Ser Val Ala Glu Ser
 820 825 830
 Tyr Asp Thr Glu Ser Gly Phe Glu Asp Ala Glu Thr Cys Asp Val Ala
 835 840 845
 Gly Ala Val Val Arg Phe Ile Asn Arg Phe Val Asp Lys Val Cys Thr
 850 855 860
 Glu Ser Gly Val Thr Ser Asp His Leu Lys Gly Leu His Val Met Val
 865 870 875 880
 Pro Asp Ile Val Gln Met His Ile Glu Thr Leu Glu Ala Val Gln Arg
 885 890 895
 Glu Ser Arg Arg Leu Pro Pro Ile Gln Lys Pro Lys Leu Leu Arg Pro
 900 905 910
 Arg Leu Leu Pro Gly Glu Glu Cys Val Leu Asp Gly Leu Arg Val Tyr
 915 920 925
 Leu Leu Pro Asp Gly Arg Glu Glu Gly Ala Gly Gly Ser Ala Gly Gly
 930 935 940

Pro Ala Leu Leu Pro Ala Glu Gly Ala Val Phe Leu Thr Thr Tyr Arg
 945 950 955 960
 Val Ile Phe Thr Gly Met Pro Thr Asp Pro Leu Val Gly Glu Gln Val
 965 970 975
 Val Val Arg Ser Phe Pro Val Ala Ala Leu Thr Lys Glu Lys Arg Ile
 980 985 990
 Ser Val Gln Thr Pro Val Asp Gln Leu Leu Gln Asp Gly Leu Gln Leu
 995 1000 1005
 Arg Ser Cys Thr Phe Gln Leu Leu Lys Met Ala Phe Asp Glu Glu Val
 1010 1015 1020
 Gly Ser Asp Ser Ala Glu Leu Phe Arg Lys Gln Leu His Lys Leu Arg
 1025 1030 1035 1040
 Tyr Pro Pro Asp Ile Arg Ala Thr Phe Ala Phe Thr Leu Gly Ser Ala
 1045 1050 1055
 His Thr Pro Gly Arg Pro Pro Arg Val Thr Lys Asp Lys Gly Pro Ser
 1060 1065 1070
 Leu Arg Thr Leu Ser Arg Asn Leu Val Lys Asn Ala Lys Lys Thr Ile
 1075 1080 1085
 Gly Arg Gln His Val Thr Arg Lys Lys Tyr Asn Pro Pro Ser Trp Glu
 1090 1095 1100
 His Arg Gly Gln Pro Pro Pro Glu Asp Gln Glu Asp Glu Ile Ser Val
 1105 1110 1115 1120
 Ser Glu Glu Leu Glu Pro Ser Thr Leu Thr Pro Ser Ser Ala Leu Lys
 1125 1130 1135
 Pro Ser Asp Arg Met Thr Met Ser Ser Leu Val Glu Arg Ala Cys Cys
 1140 1145 1150
 Arg Asp Tyr Gln Arg Leu Gly Leu Gly Thr Leu Ser Ser Ser Leu Ser
 1155 1160 1165
 Arg Ala Lys Ser Glu Pro Phe Arg Ile Ser Pro Val Asn Arg Met Tyr
 1170 1175 1180
 Ala Ile Cys Arg Ser Tyr Pro Gly Leu Leu Ile Val Pro Gln Ser Val
 1185 1190 1195 1200
 Gln Asp Asn Ala Leu Gln Arg Val Ser Arg Cys Tyr Arg Gln Asn Arg
 1205 1210 1215
 Phe Pro Val Val Cys Trp Arg Ser Gly Arg Ser Lys Ala Val Leu Leu
 1220 1225 1230
 Arg Ser Gly Gly Leu His Gly Lys Gly Val Val Gly Leu Phe Lys Ala
 1235 1240 1245

Gln Asn Ala Pro Ser Pro Gly Gln Ser Gln Ala Asp Ser Ser Ser Leu
 1250 1255 1260

Glu Gln Glu Lys Tyr Leu Gln Ala Val Val Ser Ser Met Pro Arg Tyr
 1265 1270 1275 1280

Ala Asp Ala Ser Gly Arg Asn Thr Leu Ser Gly Phe Ser Ser Ala His
 1285 1290 1295

Met Gly Ser His Val Pro Ser Pro Arg Ala Arg Val Thr Thr Leu Ser
 1300 1305 1310

Asn Pro Met Ala Ala Ser Ala Ser Arg Arg Thr Ala Pro Arg Gly
 1315 1320 1325

<210> 71

<211> 1123

<212> PRT

<213> Homo sapiens

<400> 71

Arg Phe Pro Gln Lys Asp Trp Asp Asp Thr Pro Phe Pro Gln Gly Ile
 1 5 10 15

Glu Leu Phe Cys Gln Pro Gly Gly Trp Gln Leu Ser Arg Glu Arg Lys
 20 25 30

Gln Pro Thr Phe Phe Val Val Val Leu Thr Asp Ile Asp Ser Asp Arg
 35 40 45

His Tyr Cys Ser Cys Leu Thr Phe Tyr Glu Ala Glu Ile Asn Leu Gln
 50 55 60

Gly Thr Lys Lys Glu Glu Ile Glu Gly Glu Ala Lys Val Ser Gly Leu
 65 70 75 80

Ile Gln Pro Ala Glu Val Phe Ala Pro Lys Ser Leu Val Leu Val Ser
 85 90 95

Arg Leu Tyr Tyr Pro Glu Ile Phe Arg Ala Cys Leu Gly Leu Ile Tyr
 100 105 110

Thr Val Tyr Val Asp Ser Leu Asn Val Ser Leu Glu Ser Leu Ile Ala
 115 120 125

Asn Leu Cys Ala Cys Leu Val Pro Ala Ala Gly Gly Ser Gln Lys Leu
 130 135 140

Phe Ser Leu Gly Ala Gly Asp Arg Gln Leu Ile Gln Thr Pro Leu His
 145 150 155 160

Asp Ser Leu Pro Ile Thr Gly Thr Ser Val Ala Leu Leu Phe Gln Gln
 165 170 175

Leu Gly Ile Gln Asn Val Leu Ser Leu Phe Cys Ala Val Leu Thr Glu
 180 185 190

Asn	Lys	Val	Leu	Phe	His	Ser	Ala	Ser	Phe	Gln	Arg	Leu	Ser	Asp	Ala	195	200	205
Cys	Arg	Ala	Leu	Glu	Ser	Leu	Met	Phe	Pro	Leu	Lys	Tyr	Ser	Tyr	Pro	210	215	220
Tyr	Ile	Pro	Ile	Leu	Pro	Ala	Gln	Leu	Leu	Glu	Val	Leu	Ser	Ser	Pro	225	230	235
Thr	Pro	Phe	Ile	Ile	Gly	Val	His	Ser	Val	Phe	Lys	Thr	Asp	Val	His	245	250	255
Glu	Leu	Leu	Asp	Val	Ile	Ile	Ala	Asp	Leu	Asp	Gly	Gly	Thr	Ile	Lys	260	265	270
Ile	Pro	Glu	Cys	Ile	His	Leu	Ser	Ser	Leu	Pro	Glu	Pro	Leu	Leu	His	275	280	285
Gln	Thr	Gln	Ser	Ala	Leu	Ser	Leu	Ile	Leu	His	Pro	Asp	Leu	Glu	Val	290	295	300
Ala	Asp	His	Ala	Phe	Pro	Pro	Pro	Arg	Thr	Ala	Leu	Ser	His	Ser	Lys	305	310	315
Met	Leu	Asp	Lys	Glu	Val	Arg	Ala	Val	Phe	Leu	Arg	Leu	Phe	Ala	Gln	325	330	335
Leu	Phe	Gln	Gly	Tyr	Arg	Ser	Cys	Leu	Gln	Leu	Ile	Arg	Ile	His	Ala	340	345	350
Glu	Pro	Val	Ile	His	Phe	His	Lys	Thr	Ala	Phe	Leu	Gly	Gln	Arg	Gly	355	360	365
Leu	Val	Glu	Asn	Asp	Phe	Leu	Thr	Lys	Val	Leu	Ser	Gly	Met	Ala	Phe	370	375	380
Ala	Gly	Phe	Val	Ser	Glu	Arg	Gly	Pro	Pro	Tyr	Arg	Ser	Cys	Asp	Leu	385	390	395
Phe	Asp	Glu	Leu	Val	Ala	Phe	Glu	Val	Glu	Arg	Ile	Lys	Val	Glu	Glu	405	410	415
Asn	Asn	Pro	Val	Lys	Met	Ile	Lys	His	Val	Arg	Glu	Leu	Ala	Glu	Gln	420	425	430
Leu	Phe	Lys	Asn	Glu	Asn	Pro	Asn	Pro	His	Met	Ala	Phe	Gln	Lys	Val	435	440	445
Pro	Arg	Pro	Thr	Glu	Gly	Ser	His	Leu	Arg	Val	His	Ile	Leu	Pro	Phe	450	455	460
Pro	Glu	Ile	Asn	Glu	Ala	Arg	Val	Gln	Glu	Leu	Ile	Gln	Glu	Asn	Val	465	470	475
Ala	Lys	Asn	Gln	Asn	Ala	Pro	Pro	Ala	Thr	Arg	Ile	Glu	Lys	Lys	Cys	485	490	495

Val Val Pro Ala Gly Pro Pro Val Val Ser Ile Met Asp Lys Val Thr
500 505 510
Thr Val Phe Asn Ser Ala Gln Arg Leu Glu Val Val Arg Asn Cys Ile
515 520 525
Ser Phe Ile Phe Glu Asn Lys Ile Leu Glu Thr Glu Lys Thr Leu Pro
530 535 540
Ala Ala Leu Arg Ala Leu Lys Gly Lys Ala Ala Arg Gln Cys Leu Thr
545 550 555 560
Asp Glu Leu Gly Leu His Val Gln Gln Asn Arg Ala Ile Leu Asp His
565 570 575
Gln Gln Phe Asp Tyr Ile Ile Arg Met Met Asn Cys Thr Leu Gln Asp
580 585 590
Cys Ser Ser Leu Glu Glu Tyr Asn Ile Ala Ala Ala Leu Leu Pro Leu
595 600 605
Thr Ser Ala Phe Tyr Arg Lys Leu Ala Pro Gly Val Ser Gln Phe Ala
610 615 620
Tyr Thr Cys Val Gln Asp His Pro Ile Trp Thr Asn Gln Gln Phe Trp
625 630 635 640
Glu Thr Thr Phe Tyr Asn Ala Val Gln Glu Gln Val Arg Ser Leu Tyr
645 650 655
Leu Ser Ala Lys Glu Asp Asn His Ala Pro His Leu Lys Gln Lys Asp
660 665 670
Lys Leu Pro Asp Asp His Tyr Gln Glu Lys Thr Ala Met Asp Leu Ala
675 680 685
Ala Glu Gln Leu Arg Leu Trp Pro Thr Leu Ser Lys Ser Thr Gln Gln
690 695 700
Glu Leu Val Gln His Glu Glu Ser Thr Val Phe Ser Gln Ala Ile His
705 710 715 720
Phe Ala Asn Leu Met Val Asn Leu Leu Val Pro Leu Asp Thr Ser Lys
725 730 735
Asn Lys Leu Leu Arg Thr Ser Ala Pro Gly Asp Trp Glu Ser Gly Ser
740 745 750
Asn Ser Ile Val Thr Asn Ser Ile Ala Gly Ser Val Ala Glu Ser Tyr
755 760 765
Asp Thr Glu Ser Gly Phe Glu Asp Ser Glu Asn Thr Asp Ile Ala Asn
770 775 780
Ser Val Val Arg Phe Ile Thr Arg Phe Ile Asp Lys Val Cys Thr Glu
785 790 795 800

Ser Gly Val Thr Gln Asp His Ile Lys Ser Leu His Cys Met Ile Pro
 805 810 815
 Gly Ile Val Ala Met His Ile Glu Thr Leu Glu Ala Val His Arg Glu
 820 825 830
 Ser Arg Arg Leu Pro Pro Ile Gln Lys Pro Lys Ile Leu Arg Pro Ala
 835 840 845
 Leu Leu Pro Gly Glu Glu Ile Val Cys Glu Gly Leu Arg Val Leu Leu
 850 855 860
 Asp Pro Asp Gly Arg Glu Glu Ala Thr Gly Gly Leu Leu Gly Gly Pro
 865 870 875 880
 Gln Leu Leu Pro Ala Glu Gly Ala Leu Phe Leu Thr Thr Tyr Arg Ile
 885 890 895
 Leu Phe Arg Gly Thr Pro His Asp Gln Leu Val Gly Glu Gln Thr Val
 900 905 910
 Val Arg Ser Phe Pro Ile Ala Ser Ile Thr Lys Glu Lys Lys Ile Thr
 915 920 925
 Met Gln Asn Gln Leu Gln Gln Asn Met Gln Glu Gly Leu Gln Ile Thr
 930 935 940
 Ser Ala Ser Phe Gln Leu Ile Lys Val Ala Phe Asp Glu Glu Val Ser
 945 950 955 960
 Pro Glu Val Val Glu Ile Phe Lys Lys Gln Leu Met Lys Phe Arg Tyr
 965 970 975
 Pro Gln Ser Ile Phe Ser Thr Phe Ala Phe Ala Ala Gly Gln Thr Thr
 980 985 990
 Pro Gln Ile Ile Leu Pro Lys Gln Lys Glu Lys Asn Thr Ser Phe Arg
 995 1000 1005
 Thr Phe Ser Lys Thr Ile Val Lys Gly Ala Lys Arg Ala Gly Lys Met
 1010 1015 1020
 Thr Ile Gly Arg Gln Tyr Leu Leu Lys Lys Lys Thr Gly Thr Ile Val
 1025 1030 1035 1040
 Glu Glu Arg Val Asn Arg Pro Gly Trp Asn Glu Asp Asp Asp Val Ser
 1045 1050 1055
 Val Ser Asp Glu Ser Glu Leu Pro Thr Ser Thr Thr Leu Lys Ala Ser
 1060 1065 1070
 Glu Lys Ser Thr Met Glu Gln Leu Val Glu Lys Ala Cys Phe Arg Asp
 1075 1080 1085
 Tyr Gln Arg Leu Gly Leu Gly Thr Ile Ser Gly Ser Ser Ser Arg Ser
 1090 1095 1100

Arg Pro Glu Tyr Phe Arg Ile Thr Ala Ser Asn Arg Met Tyr Ser Leu
 1105 1110 1115 1120

Cys Arg Arg

<210> 72

<211> 1728

<212> PRT

<213> Drosophila melanogaster

<400> 72

Met Thr Glu Asn Lys Ile Leu Phe Leu Ser Lys Cys Tyr Trp His Leu
 1 5 10 15

Thr Asp Ser Cys Arg Ala Leu Val Ala Leu Met Tyr Pro Phe Arg Tyr
 20 25 30

Thr His Val Tyr Ile Pro Ile Leu Pro Ala Pro Leu Thr Glu Val Leu
 35 40 45

Ser Thr Pro Thr Pro Phe Ile Met Gly Ile His Ser Ser Leu Gln Thr
 50 55 60

Glu Ile Thr Asp Leu Leu Asp Val Ile Val Val Asp Leu Asp Gly Gly
 65 70 75 80

Leu Val Thr Ile Pro Glu Ser Leu Thr Pro Pro Val Pro Ile Leu Pro
 85 90 95

Ser Pro Leu Trp Glu Gln Thr Gln Asp Leu Leu Ser Met Ile Leu Phe
 100 105 110

Pro Asn Leu Ala Gln Ala Asp Leu Ala Phe Pro Thr Leu Glu Arg Pro
 115 120 125

Ser Ala Ile Ala Lys Thr Asp Ala Gln Ile Asp Lys Glu Leu Arg Ala
 130 135 140

Ile Phe Met Arg Leu Phe Ala Gln Leu Leu Gln Gly Tyr Arg Ser Cys
 145 150 155 160

Leu Thr Ile Ile Arg Ile His Pro Lys Pro Val Ile Thr Phe His Lys
 165 170 175

Ala Gly Phe Leu Gly Ala Arg Asp Leu Ile Glu Ser Glu Phe Leu Phe
 180 185 190

Arg Val Leu Asp Ser Met Phe Phe Thr Thr Phe Val Asn Glu Arg Gly
 195 200 205

Pro Pro Trp Arg Ser Ser Asp Ala Trp Asp Glu Leu Tyr Ser Ser Met
 210 215 220

Asn Glu Leu Leu Lys Ser Glu Ala Gln Asn Arg Asn Leu Ile Leu Thr

225	230	235	240
His Ile Gln Glu Leu Gly Arg Val Leu Tyr Glu Asn Glu Gly Thr Leu	245	250	255
Ala His Ile Ser Tyr Ala Gln Lys Val Leu Arg Pro Pro Glu Gly Ala	260	265	270
Phe Gln Arg Ile His Gln Pro Ala Phe Pro Arg Ile Ser Ser Glu Lys	275	280	285
Val Glu Leu Ile Ile Gln Glu Gly Ile Arg Lys Asn Gly Val Pro Gln	290	295	300
Arg Phe His Val Thr Arg Asn Gln His Arg Ile Ile Pro Met Gly Pro	305	310	315
Arg Leu Pro Glu Ala Leu Asp Val Arg Pro Asn Val Gln Asn Ser Ala	325	330	335
Arg Arg Leu Glu Val Leu Arg Ile Cys Val Ser Tyr Ile Phe Glu Asn	340	345	350
Arg Ile Thr Asp Ala Arg Lys Leu Leu Pro Ala Val Met Arg Thr Leu	355	360	365
Met His Arg Asp Ala Arg Leu Ile Leu Cys Arg Glu Phe Phe Gly Tyr	370	375	380
Val His Gly Asn Lys Ala Val Leu Asp His Gln Gln Phe Glu Leu Val	385	390	395
Val Arg Phe Met Asn Lys Ala Leu Gln Lys Ser Ser Gly Ile Asp Glu	405	410	415
Tyr Thr Val Ala Ala Ala Leu Leu Pro Met Ser Thr Ile Phe Cys Arg	420	425	430
Lys Leu Ser Thr Gly Val Val Gln Phe Ala Tyr Thr Glu Ile Gln Asp	435	440	445
His Ala Ile Trp Lys Asn Leu Gln Phe Trp Glu Ser Thr Phe Phe Gln	450	455	460
Asp Val Gln Gly Gln Ile Lys Ala Leu Tyr Leu Leu His Arg Arg Gln	465	470	475
Asn Glu His Gln Lys Glu Ala Asn Cys Val Leu Asp Glu Val Pro Leu	485	490	495
Glu Glu Pro Thr Ala Leu Glu Ile Thr Ala Glu Gln Leu Arg Lys Ser	500	505	510
Pro Asn Ile Glu Glu Glu Lys Lys Ala Glu Leu Ala Lys Ser Glu Glu	515	520	525
Ser Thr Leu Tyr Ser Gln Ala Ile His Phe Ala Asn Arg Met Val Ser			

530	535	540
Leu 545	Leu Ile Pro Leu Asp Val Asn Val Asp Ala 555	Ala Ser Lys Pro Lys 560
Pro 565	Ala Phe Arg Leu Glu Glu Asn Gln Ser Val Ser Asn Ser Ile Met 575	
Gly 580	Ser His Ser Leu Ser Glu His Ser Asp Glu Gly Phe Glu Glu Asn 590	
Asn 595	Ala Leu Glu Ile Gly Val Thr Val Gly Lys Thr Ile Ser Arg Phe 605	
Ile 610	Asp Cys Val Cys Thr Glu Gly Gly Val Thr Ser Glu His Ile Arg 620	
Asn 625	Leu His Asp Met Val Pro Gly Val Val His Met His Ile Glu Ser 640	
Leu 645	Glu Pro Val Tyr Leu Glu Ala Lys Arg His Pro His Val Gln Lys 655	
Pro 660	Lys Ile Gln Thr Pro Cys Leu Leu Pro Gly Glu Asp Leu Val Thr 670	
Asp 675	His Leu Arg Cys Phe Leu Met Pro Asp Gly Arg Glu Asp Glu Thr 685	
Gln 690	Cys Leu Ile Pro Ala Glu Gly Ala Leu Phe Leu Thr Asn Tyr Arg 700	
Val 705	Ile Phe Lys Gly Ser Pro Cys Asp Pro Leu Phe Cys Glu Gln Val 720	
Ile 725	Val Arg Thr Phe Pro Ile Ala Ser Leu Leu Lys Glu Lys Lys Ile 735	
Ser 740	Val Leu Tyr Leu Ala His Leu Asp Gln Thr Leu Thr Glu Gly Leu 750	
Gln 755	Leu Arg Ser Ser Ser Phe Gln Leu Ile Lys Val Ala Phe Asp Pro 765	
Glu 770	Val Thr Pro Glu Gln Ile Glu Ser Phe Arg Lys Ile Leu Ser Lys 780	
Ala 785	Arg His Pro Phe Asp Glu Phe Glu Tyr Phe Ala Phe Gln Ser Tyr 800	
Gly 805	Thr Met Leu Gln Gly Val Ala Pro Leu Lys Thr Lys Glu Lys Tyr 815	
Ser 820	Thr Leu Lys Gly Phe Ala Lys Lys Thr Leu Leu Arg Gly Ala Lys 830	
Lys	Ala Gly Phe Lys Gln Lys Gln Gln Thr Lys Arg Lys Leu Val Ser	

835					840					845						
Asp	Tyr	Asp	Tyr	Gly	Ser	Ala	Asp	Ala	Gln	Glu	Thr	Gln	Ser	Ile	Asp	
850					855					860						
Asp	Glu	Leu	Glu	Asp	Gly	Asp	Glu	Phe	Glu	Thr	Gln	Asn	Asn	Ala	Met	
865					870					875					880	
Pro	Arg	Leu	Leu	Thr	Thr	Lys	Asp	Val	Glu	Arg	Met	Arg	Glu	Arg	Ser	
885					890					895						
Tyr	Val	Gln	Asp	Trp	Lys	Arg	Leu	Gly	Phe	Asp	Ala	Glu	Ser	Gln	Arg	
900					905					910						
Gly	Phe	Arg	Ile	Ser	Asn	Ala	Asn	Thr	Ser	Tyr	Ala	Thr	Cys	Arg	Ser	
915					920					925						
Tyr	Pro	Ala	Ile	Ile	Val	Ala	Pro	Val	Gln	Cys	Ser	Asp	Ala	Ala	Ile	
930					935					940						
Met	His	Leu	Gly	Arg	Cys	Phe	Lys	Gly	Gln	Arg	Ile	Pro	Leu	Pro	Thr	
945					950					955					960	
Trp	Arg	His	Ala	Asn	Gly	Ala	Leu	Leu	Ile	Arg	Gly	Gly	Gln	Pro	Asn	
965					970					975						
Ser	Lys	Ser	Val	Ile	Gly	Met	Leu	Lys	Asn	Thr	Thr	Gly	Ser	Thr	Thr	
980					985					990						
Asn	Ala	His	His	Asp	Val	Thr	His	Tyr	Pro	Glu	Gln	Asp	Lys	Tyr	Phe	
995					1000					1005						
Leu	Ala	Leu	Ile	Asn	Thr	Met	Pro	Lys	Leu	Thr	Pro	Leu	Ala	Leu	Asn	
1010					1015					1020						
Gln	Tyr	Ser	Gly	Met	Asn	Leu	Ser	Met	Ser	Ser	Leu	Met	Gly	His	Ser	
1025					1030					1035					1040	
Ser	Ser	Asp	Asp	Arg	Gln	Pro	Leu	Thr	Pro	Glu	Leu	Ser	Arg	Lys	His	
1045					1050					1055						
Lys	Asn	Asn	Leu	Asp	Ile	Ser	Asp	Gly	Asn	Lys	Ser	Ser	Gln	Gly	Gly	
1060					1065					1070						
Lys	Gly	Gly	Thr	Met	Lys	Gly	Asn	Pro	Lys	Asn	Ser	Leu	Ala	His	Pro	
1075					1080					1085						
Phe	Arg	Lys	Met	Arg	Leu	Tyr	Ala	Leu	Gly	Glu	Lys	Ser	Gln	Ala	Lys	
1090					1095					1100						
Ser	Asn	Met	Asn	Val	Asp	Phe	Cys	Ala	Asp	Phe	Ile	Pro	Val	Asp	Tyr	
1105					1110					1115					1120	
Pro	Asp	Ile	Arg	Gln	Ser	Arg	Pro	Ala	Phe	Lys	Lys	Leu	Ile	Arg	Ala	
1125					1130					1135						
Cys	Met	Pro	Ser	His	Asn	Thr	Asn	Glu	Ala	Asp	Gly	Gln	Ser	Phe	Ala	

1140	1145	1150
Lys Met Val Glu Gln Ser Asp Trp Leu Gln Gln Ile Ser Ser Leu Met		
1155	1160	1165
Gln Leu Ser Gly Ala Val Val Asp Leu Ile Asp Leu Gln Glu Ser Ser		
1170	1175	1180
Val Met Leu Ser Leu Glu Asp Gly Ser Asp Val Thr Ala Gln Leu Ser		
1185	1190	1195
Ser Ile Ala Gln Leu Cys Leu Asp Pro Tyr Tyr Arg Ser Leu Asp Gly		
1205	1210	1215
Phe Arg Val Leu Val Glu Lys Glu Trp Leu Ala Phe Gly His Arg Phe		
1220	1225	1230
Ala His Arg Ser Asn Leu Lys Pro Ser His Ala Asn Thr Asn Ile Ala		
1235	1240	1245
Phe Ala Pro Thr Phe Leu Gln Phe Leu Asp Val Val His Gln Leu Gln		
1250	1255	1260
Arg Gln Phe Pro Met Ala Phe Glu Phe Asn Asp Phe Tyr Leu Arg Phe		
1265	1270	1275
Leu Ala Tyr His Ser Val Ser Cys Arg Phe Arg Thr Phe Leu Phe Asp		
1285	1290	1295
Cys Glu Leu Glu Arg Ser Asp Ser Gly Ile Ala Ala Met Glu Asp Lys		
1300	1305	1310
Arg Gly Ser Leu Asn Ala Lys His Met Phe Gly Ala Gly Gly Met Ala		
1315	1320	1325
Thr Asn Gly Ser Asp Asp Glu Cys Ser Val Tyr Pro Leu Asp Ile Arg		
1330	1335	1340
Ser Gln Arg Ala Pro Ala Pro Leu Asn Arg Ile Gly His Ser Ile Phe		
1345	1350	1355
Asp Tyr Ile Glu Arg Gln His Asn Lys Thr Pro Ile Phe Tyr Asn Phe		
1365	1370	1375
Leu Tyr Ser Gly Asp Lys Ser Val Thr Leu Arg Pro Gln Asn Asn Val		
1380	1385	1390
Ala Ala Leu Asp Leu Trp Cys Tyr Tyr Thr Asn Glu Glu Leu Ala Gln		
1395	1400	1405
Gly Ala Pro Tyr Asp Leu Glu Val Thr Thr Val Asp Asp Glu Ile Asp		
1410	1415	1420
Leu Ser Glu Thr Lys Gly Lys Arg Met Val Ile Thr Ala Gly Tyr Asp		
1425	1430	1435
Asn Met Glu Lys Cys Asn Pro Ser Ala Tyr Val Cys Leu Leu Ser Glu		

1445	1450	1455
Val Lys Gln Ala Glu Thr Glu Arg Gly His Leu Pro Gln Lys Trp Leu		
1460	1465	1470
Gln Val Trp Asn Ser Leu Glu Val Pro Gln Leu Glu Pro Val Ala Arg		
1475	1480	1485
Asn Thr Ser Leu Gly Asn Ile Phe Val Gln Thr His Gln His Lys Arg		
1490	1495	1500
Ser Thr Leu Glu Ile Ile Met Lys Gly Arg Leu Ala Gly Tyr Gln Asp		
1505	1510	1515
Lys Tyr Phe His Pro His Arg Phe Glu Lys His Pro Tyr Thr Thr Pro		
	1525	1530
Thr Asn Cys Asn His Cys Thr Lys Leu Leu Trp Gly Pro Val Gly Tyr		
	1540	1545
Arg Cys Met Asp Cys Gly Asn Ser Tyr His Glu Lys Cys Thr Glu His		
	1555	1560
Ser Met Lys Asn Cys Thr Lys Tyr Lys Ala Ile Asp Gly Ala Val Gly		
	1570	1575
Pro Pro Asn Val Asn Met Ser Gln Gly Asp Thr Ala Ser Ile Ala Ser		
1585	1590	1595
Ser Ala Ala Thr Thr Ala Arg Thr Ser Ser His His Phe Tyr Asn Gln		
	1605	1610
Phe Ser Ser Asn Val Ala Glu Asn Arg Thr His Glu Gly His Leu Tyr		
	1620	1625
Lys Arg Gly Ala Leu Leu Lys Gly Trp Lys Gln Arg Trp Phe Val Leu		
	1635	1640
Asp Ser Ile Lys His Gln Leu Arg Tyr Tyr Asp Thr Ser Glu Asp Thr		
	1650	1655
Ala Pro Lys Gly Ile Ile Glu Leu Ala Glu Val Gln Ser Val Thr Ala		
1665	1670	1675
Ala Gln Pro Ala Gln Ile Gly Ala Lys Gly Val Asp Glu Lys Gly Phe		
	1685	1690
Phe Asp Leu Lys Thr Ser Lys Arg Ile Tyr Asn Phe Tyr Ala Ile Asn		
	1700	1705
Ala Asn Leu Ala Gln Glu Trp Ile Glu Lys Leu Gln Ala Cys Leu Gln		
	1715	1720

<210> 73
 <211> 146
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: DENN Consensus Sequence

<400> 73

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Leu Leu Ser Ser Pro Phe Pro Ala Pro Gly Lys Thr Leu Arg Phe Ile
 1             5             10             15

Glu Leu Leu Pro Thr Asp Gly Asn Asp Val Leu Glu Leu Ala Arg Pro
      20             25             30

Asp Pro Ser Arg Leu Pro Leu Val Asp Ala Ser Phe His Ile Leu Phe
      35             40             45

Gln Ala Leu Gly Val Asp Gln Cys Leu Arg Val Leu Ala Ser Leu Leu
 50             55             60

Leu Glu His Lys Ile Leu Phe His Ser Arg Lys Leu Ser Thr Leu Ser
 65             70             75             80

Ser Cys Cys Glu Ala Val Val Ala Leu Leu Tyr Pro Phe Glu Trp Gln
      85             90             95

Cys Pro Tyr Ile Pro Leu Leu Pro Ala Ser Leu Ala Asp Val Leu Leu
      100            105            110

Ala Pro Thr Pro Tyr Leu Ile Gly Val Pro Ser Ser Phe Phe Asp Asn
      115            120            125

Lys Leu Leu Glu Leu Pro Pro Ser Asp Val Ile Cys Val Asp Leu Asp
      130            135            140

Thr Asn
145

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<210> 74
 <211> 104
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Pleckstrin homology domain Consensus Sequence

<400> 74

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Val Ile Lys Glu Gly Trp Leu Leu Lys Lys Ser Ser Gly Gly Lys Lys
 1             5             10             15

Ser Trp Lys Lys Arg Tyr Phe Val Leu Phe Asn Gly Val Leu Leu Tyr
      20             25             30

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Tyr Lys Ser Lys Lys Lys Lys Ser Ser Ser Lys Pro Lys Gly Ser Ile
 35 40 45
 Pro Leu Ser Gly Cys Thr Val Arg Glu Ala Pro Asp Ser Asp Ser Asp
 50 55 60
 Lys Lys Lys Asn Cys Phe Glu Ile Val Thr Pro Asp Arg Lys Thr Leu
 65 70 75 80
 Leu Leu Gln Ala Glu Ser Glu Glu Glu Arg Lys Glu Trp Val Glu Ala
 85 90 95
 Leu Arg Lys Ala Ile Ala Lys Leu
 100

<210> 75
 <211> 100
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Pleckstrin
 homology domain Consensus Sequence

<400> 75
 Ile Val Lys Glu Gly Trp Leu Leu Lys Lys Ser Thr Val Lys Lys Lys
 1 5 10 15
 Arg Trp Lys Lys Arg Tyr Phe Phe Leu Phe Asn Asp Val Leu Ile Tyr
 20 25 30
 Tyr Lys Asp Lys Lys Lys Ser Tyr Glu Pro Lys Gly Ser Ile Pro Leu
 35 40 45
 Ser Gly Cys Ser Val Glu Asp Val Pro Asp Ser Glu Phe Lys Arg Pro
 50 55 60
 Asn Cys Phe Gln Leu Arg Ser Arg Asp Gly Lys Glu Thr Phe Ile Leu
 65 70 75 80
 Gln Ala Glu Ser Glu Glu Glu Arg Gln Asp Trp Ile Lys Ala Ile Gln
 85 90 95
 Ser Ala Ile Arg
 100

<210> 76
 <211> 240
 <212> PRT
 <213> Mus musculus

<400> 76
 Met Gln Cys Phe Lys Phe Ile Lys Val Met Met Phe Leu Phe Asn Leu
 1 5 10 15

Leu Ile Phe Leu Cys Gly Ala Ala Leu Leu Ala Val Gly Ile Trp Val
 20 25 30
 Ser Val Asp Gly Thr Ser Phe Leu Lys Val Phe Gly Ser Leu Ser Ser
 35 40 45
 Ser Ala Met Gln Phe Val Asn Val Gly Tyr Phe Leu Ile Ala Ala Gly
 50 55 60
 Ala Val Leu Phe Ile Leu Gly Phe Leu Gly Cys Tyr Gly Ala His Ser
 65 70 75 80
 Glu Asn Lys Cys Val Leu Met Met Phe Phe Ser Ile Leu Leu Ile Ile
 85 90 95
 Phe Ile Ala Glu Ile Ala Gly Ala Val Val Ala Leu Val Tyr Thr Thr
 100 105 110
 Leu Ala Glu Gln Phe Leu Thr Leu Leu Val Val Pro Ala Ile Glu Lys
 115 120 125
 Asp Tyr Gly Tyr Gln Thr Asp Phe Thr Gln Val Trp Asn Thr Thr Met
 130 135 140
 Glu Glu Leu His Cys Cys Gly Phe Asn Asn Tyr Thr Asp Phe Asn Ala
 145 150 155 160
 Ser Arg Phe Val Lys Glu Asn Lys Val Phe Pro Pro Pro Cys Cys Ala
 165 170 175
 Asn Pro Gly Asn His Thr Val Glu Pro Cys Thr Glu Glu Lys Ala Lys
 180 185 190
 Ser Met Lys Val Gln Gly Cys Phe Lys Glu Ile Leu His Arg Ile Arg
 195 200 205
 Ala Asn Ala Val Thr Val Gly Gly Val Ala Val Gly Val Ala Ala Leu
 210 215 220
 Glu Leu Ala Ala Met Val Val Ser Met Tyr Leu Tyr Cys Asn Leu Lys
 225 230 235 240

<210> 77
 <211> 241
 <212> PRT
 <213> Homo sapiens

<400> 77
 Met Gln Cys Phe Ser Phe Ile Lys Thr Met Met Ile Leu Phe Asn Leu
 1 5 10 15
 Leu Ile Phe Leu Cys Gly Ala Ala Leu Leu Ala Val Gly Ile Trp Val
 20 25 30

Ser Ile Asp Gly Ala Ser Phe Leu Lys Ile Phe Gly Pro Leu Ser Ser
 35 40 45
 Ser Ala Met Gln Phe Val Asn Val Gly Tyr Phe Leu Ile Ala Ala Gly
 50 55 60
 Val Val Val Phe Ala Leu Gly Phe Leu Gly Cys Tyr Gly Ala Lys Thr
 65 70 75 80
 Glu Ser Lys Cys Ala Leu Val Thr Phe Phe Phe Ile Leu Leu Leu Ile
 85 90 95
 Phe Ile Ala Glu Val Ala Ala Ala Val Val Ala Leu Val Tyr Thr Thr
 100 105 110
 Met Ala Glu His Phe Leu Thr Leu Leu Val Val Pro Ala Ile Lys Lys
 115 120 125
 Asp Tyr Gly Ser Gln Glu Asp Phe Thr Gln Val Trp Asn Thr Thr Met
 130 135 140
 Lys Gly Leu Lys Cys Cys Gly Phe Thr Asn Tyr Thr Asp Phe Glu Asp
 145 150 155 160
 Ser Pro Tyr Phe Lys Glu Asn Ser Ala Phe Pro Pro Phe Cys Cys Asn
 165 170 175
 Asp Asn Val Thr Asn Thr Ala Asn Glu Thr Cys Thr Glu Gln Lys Ala
 180 185 190
 His Asp Gln Lys Val Glu Gly Cys Phe Asn Gln Leu Leu Tyr Asp Ile
 195 200 205
 Arg Thr Asn Ala Val Thr Val Gly Gly Val Ala Ala Gly Ile Gly Gly
 210 215 220
 Leu Glu Leu Ala Ala Met Ile Val Ser Met Tyr Leu Tyr Cys Asn Leu
 225 230 235 240
 Gln

<210> 78
 <211> 241
 <212> PRT
 <213> Homo sapiens

<400> 78
 Met Gln Cys Phe Ser Phe Ile Lys Thr Met Met Ile Leu Phe Asn Leu
 1 5 10 15
 Leu Ile Phe Leu Cys Gly Ala Ala Leu Leu Ala Val Gly Ile Trp Val
 20 25 30
 Ser Ile Asp Gly Ala Ser Phe Leu Lys Ile Phe Gly Pro Leu Ser Ser

Pro Leu Leu Phe Thr Gly Ala Tyr Ile Met Leu Ala Met Gly Ala Met
 50 55 60
 Leu Phe Leu Leu Gly Phe Leu Gly Cys Cys Gly Ala Ile Arg Glu Asn
 65 70 75 80
 Lys Cys Leu Leu Leu Phe Phe Phe Met Phe Ile Leu Leu Ile Phe Leu
 85 90 95
 Ala Glu Leu Ser Ala Ala Ile Leu Ala Phe Ile Phe Arg Glu Asn Leu
 100 105 110
 Thr Arg Glu Phe Phe Thr Lys Glu Leu Lys Lys His Tyr Val Arg Asn
 115 120 125
 Asn Asp Thr His Val Phe Ser Ser Thr Trp Asn Ser Val Met Ile Thr
 130 135 140
 Phe Ala Cys Cys Gly Val Asn Gly Pro Glu Asp Phe Glu Ala Val Pro
 145 150 155 160
 Pro Leu Ser His Leu Pro Leu Glu Glu Thr Thr Pro Glu Ala Cys Cys
 165 170 175
 Gln Arg Asn Val Gln Ser Arg Glu Gly Met Phe Val Asn Arg Lys Ala
 180 185 190
 Cys Leu Glu Gly Asp Glu Arg Phe Gln Asn Arg Gln Gly Cys Tyr Thr
 195 200 205
 Val Ile Leu Asn Ser Phe Glu Thr Tyr Val Tyr Leu Ala Gly Ala Leu
 210 215 220
 Ala Ile Gly Val Leu Ala Ile Glu Leu Phe Ala Met Ile Phe Ala Met
 225 230 235 240
 Cys Leu Phe Arg Gly Ile Gln
 245

<210> 80
 <211> 282
 <212> PRT
 <213> Caenorhabditis elegans

<400> 80
 Met Gly Ser Cys Val Asn Ala Leu Arg Ile Val Thr Phe Leu Phe Asn
 1 5 10 15
 Phe Ala Phe Trp Leu Ser Gly Val Val Val Phe Gly Leu Gly Ile Trp
 20 25 30
 Leu Leu Phe Asp Pro Ala Ala Ser Asp Phe Phe Ala Leu His Ser Thr
 35 40 45
 His Pro Gly Ala Phe Arg Tyr Val Gly Trp Phe Leu Val Gly Ala Gly
 50 55 60

Ala Ile Ile Ile Leu Val Gly Tyr Phe Gly Cys Ile Gly Ala Trp Lys
 65 70 75 80
 Met Asn Gln Cys Ala Leu Ala Phe Phe Cys Cys Ile Leu Ile Leu Ala
 85 90 95
 Phe Phe Leu Glu Leu Ala Ala Ala Val Thr Leu Phe His Lys Gln Glu
 100 105 110
 His Ile Lys His Tyr Val Glu Ser Ser Met Tyr Asp Thr Ile Arg Asn
 115 120 125
 Arg Tyr Ser Ser Glu Thr Ala Phe Lys Asp Ala Phe Asp Thr Val Gln
 130 135 140
 Glu Lys Phe Glu Cys Cys Gly Val Lys Thr Tyr Thr Asp Trp Leu Ser
 145 150 155 160
 Ala Arg Trp Asp Ala Glu Pro Ser Thr Gln Leu Glu Val Asn Glu Glu
 165 170 175
 Asp Ala Gly Arg Ile Glu His Gly Ile Gly Ala Phe Gly Gly Asn Lys
 180 185 190
 Gly Thr Gly Tyr Gly Arg Val Pro Ser Ser Cys Cys Asn Glu His Gly
 195 200 205
 Lys Leu Ser Tyr Pro Asn Asn Cys Gly Arg Ser Phe Ser Gln Ala Pro
 210 215 220
 Leu Asn Thr Tyr Ala Gln Phe Ile Asn Thr Arg Gly Cys Ala Asp Ala
 225 230 235 240
 Val Tyr Glu Ser Val Ser Ser Ser Leu Ser Leu Ile Val Gly Val Cys
 245 250 255
 Val Val Leu Cys Ile Val Gln Leu Leu Gly Ile Val Leu Ser Met Thr
 260 265 270
 Leu Cys Cys Cys Lys Gly Asn Ser Lys Lys
 275 280

<210> 81
 <211> 222
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Tetraspanin
 Family Consensus Sequence

<400> 81
 Lys Tyr Leu Leu Phe Leu Leu Asn Leu Leu Phe Trp Leu Cys Gly Ile
 1 5 10 15

Leu Leu Leu Ala Val Gly Ile Trp Leu Leu Val Asp Leu Ser Ser Phe
 20 25 30
 Ser Glu Leu Leu Gly Ser Leu Ser Ser Leu Val Ala Ala Tyr Val Leu
 35 40 45
 Ile Ala Val Gly Ala Ile Leu Phe Leu Val Gly Phe Leu Gly Cys Cys
 50 55 60
 Gly Ala Ile Arg Glu Ser Arg Cys Leu Leu Gly Leu Tyr Phe Val Phe
 65 70 75 80
 Leu Leu Leu Ile Phe Ile Leu Glu Val Ala Ala Gly Ile Leu Ala Phe
 85 90 95
 Val Phe Arg Asp Lys Leu Glu Ser Ser Leu Asn Glu Ser Leu Lys Asn
 100 105 110
 Ala Ile Lys Asn Tyr Tyr Asp Thr Asp Pro Asp Glu Arg Asn Ala Trp
 115 120 125
 Asp Lys Leu Gln Glu Gln Phe Lys Cys Cys Gly Val Asn Gly Tyr Thr
 130 135 140
 Asp Trp Phe Asp Ser Gln Trp Phe Ser Asn Gly Val Pro Phe Ser Cys
 145 150 155 160
 Cys Asn Pro Ser Val Ser Cys Asn Ser Ala Gln Asp Glu Glu Asp Thr
 165 170 175
 Ile Tyr Gln Glu Gly Cys Leu Glu Lys Leu Leu Glu Trp Leu Glu Glu
 180 185 190
 Asn Leu Leu Ile Val Gly Gly Val Ala Leu Gly Ile Ala Leu Ile Gln
 195 200 205
 Leu Leu Gly Met Ile Leu Ser Cys Cys Leu Cys Cys Ser Ile
 210 215 220

<210> 82
 <211> 135
 <212> PRT
 <213> Bos taurus

<400> 82
 Met Ala Thr Val Gln Gln Leu Val Gly Arg Trp Arg Leu Val Glu Ser
 1 5 10 15
 Lys Gly Phe Asp Glu Tyr Met Lys Glu Val Gly Val Gly Met Ala Leu
 20 25 30
 Arg Lys Val Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Ser Asp
 35 40 45
 Gly Lys Asn Leu Ser Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln
 50 55 60

Phe Ser Cys Lys Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly
 65 70 75 80
 Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln
 85 90 95
 His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Glu
 100 105 110
 Asp Gly Lys Leu Val Val Val Cys Val Met Asn Asn Val Thr Cys Thr
 115 120 125
 Arg Val Tyr Glu Lys Val Glu
 130 135

<210> 83
 <211> 135
 <212> PRT
 <213> Bos taurus

<400> 83
 Met Ala Thr Val Gln Gln Leu Val Gly Arg Trp Arg Leu Val Glu Ser
 1 5 10 15
 Lys Gly Phe Asp Glu Tyr Met Lys Glu Val Gly Val Gly Met Ala Leu
 20 25 30
 Arg Lys Val Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Ser Asp
 35 40 45
 Gly Lys Asn Pro Ser Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln
 50 55 60
 Phe Ser Cys Lys Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly
 65 70 75 80
 Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln
 85 90 95
 His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Glu
 100 105 110
 Asp Gly Lys Leu Val Val Val Cys Val Met Asn Asn Val Thr Cys Thr
 115 120 125
 Arg Val Tyr Glu Lys Val Glu
 130 135

<210> 84
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 84

Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser
 1 5 10 15
 Lys Gly Phe Asp Glu Tyr Met Lys Glu Leu Gly Val Gly Ile Ala Leu
 20 25 30
 Arg Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp
 35 40 45
 Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln
 50 55 60
 Phe Ser Cys Thr Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly
 65 70 75 80
 Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln
 85 90 95
 His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys
 100 105 110
 Asp Gly Lys Leu Val Val Glu Cys Val Met Asn Asn Val Thr Cys Thr
 115 120 125
 Arg Ile Tyr Glu Lys Val Glu
 130 135

<210> 85
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 85
 Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser
 1 5 10 15
 Arg Gly Phe Asp Glu Tyr Val Lys Glu Leu Gly Val Gly Ile Ala Leu
 20 25 30
 Arg Lys Met Asp Thr Ile Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp
 35 40 45
 Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln
 50 55 60
 Phe Ser Cys Thr Leu Gly Glu Asn Phe Glu Glu Thr Thr Ala Asp Gly
 65 70 75 80
 Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln
 85 90 95
 His Gln Glu Trp Asp Gly Lys Glu Asn Thr Ile Arg Arg Lys Leu Lys
 100 105 110
 Asp Gly Lys Leu Val Val Asp Cys Val Met Asn Ser Val Thr Cys Thr
 115 120 125

Arg Ile Tyr Glu Lys Val Glu
 130 135

<210> 86
 <211> 135
 <212> PRT
 <213> Rattus norvegicus

<400> 86
 Met Ala Ser Leu Lys Asp Leu Glu Gly Lys Trp Arg Leu Val Glu Ser
 1 5 10 15
 His Gly Phe Glu Asp Tyr Met Lys Glu Leu Gly Val Gly Leu Ala Leu
 20 25 30
 Arg Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Leu Asp
 35 40 45
 Gly Asn Asn Leu Thr Val Lys Thr Glu Ser Thr Val Lys Thr Thr Val
 50 55 60
 Phe Ser Cys Thr Leu Gly Glu Lys Phe Asp Glu Thr Thr Ala Asp Gly
 65 70 75 80
 Arg Lys Thr Glu Thr Val Cys Thr Phe Thr Asp Gly Ala Leu Val Gln
 85 90 95
 His Gln Lys Trp Glu Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Asn
 100 105 110
 Asp Gly Lys Met Val Val Glu Cys Val Met Asn Asn Ala Ile Cys Thr
 115 120 125
 Arg Val Tyr Glu Lys Val Gln
 130 135

<210> 87
 <211> 307
 <212> PRT
 <213> Homo sapiens

<400> 87
 Met Gly Gly Leu Thr Ala Ser Asp Val His Pro Thr Leu Gly Val Gln
 1 5 10 15
 Leu Phe Ser Ala Gly Ile Ala Ala Cys Leu Ala Asp Val Ile Thr Phe
 20 25 30
 Pro Leu Asp Thr Ala Lys Val Arg Leu Gln Val Gln Gly Glu Cys Pro
 35 40 45
 Thr Ser Ser Val Ile Arg Tyr Lys Gly Val Leu Gly Thr Ile Thr Ala
 50 55 60

Val Val Lys Thr Glu Gly Arg Met Lys Leu Tyr Ser Gly Leu Pro Ala
 65 70 75 80
 Gly Leu Gln Arg Gln Ile Ser Ser Ala Ser Leu Arg Ile Gly Leu Tyr
 85 90 95
 Asp Thr Val Gln Glu Phe Leu Thr Ala Gly Lys Glu Thr Ala Pro Ser
 100 105 110
 Leu Gly Ser Lys Ile Leu Ala Gly Leu Thr Thr Gly Gly Val Ala Val
 115 120 125
 Phe Ile Gly Gln Pro Thr Glu Val Val Lys Val Arg Leu Gln Ala Gln
 130 135 140
 Ser His Leu His Gly Ile Lys Pro Arg Tyr Thr Gly Thr Tyr Asn Ala
 145 150 155 160
 Tyr Arg Ile Ile Ala Thr Thr Glu Gly Leu Thr Gly Leu Trp Lys Gly
 165 170 175
 Thr Thr Pro Asn Leu Met Arg Ser Val Ile Ile Asn Cys Thr Glu Leu
 180 185 190
 Val Thr Tyr Asp Leu Met Lys Glu Ala Phe Val Lys Asn Asn Ile Leu
 195 200 205
 Ala Asp Asp Val Pro Cys His Leu Val Ser Ala Leu Ile Ala Gly Phe
 210 215 220
 Cys Ala Thr Ala Met Ser Ser Pro Val Asp Val Val Lys Thr Arg Phe
 225 230 235 240
 Ile Asn Ser Pro Pro Gly Gln Tyr Lys Ser Val Pro Asn Cys Ala Met
 245 250 255
 Lys Val Phe Thr Asn Glu Gly Pro Thr Ala Phe Phe Lys Gly Leu Val
 260 265 270
 Pro Ser Phe Leu Arg Leu Gly Ser Trp Asn Val Ile Met Phe Val Cys
 275 280 285
 Phe Glu Gln Leu Lys Arg Glu Leu Ser Lys Ser Arg Gln Thr Met Asp
 290 295 300
 Cys Ala Thr
 305

<210> 88
 <211> 307
 <212> PRT
 <213> Homo sapiens

<400> 88
 Met Gly Gly Leu Thr Ala Ser Asp Val His Pro Thr Leu Gly Val Gln
 1 5 10 15

Leu Phe Ser Ala Pro Ile Ala Ala Cys Leu Ala Asp Val Ile Thr Phe
 20 25 30
 Pro Leu Asp Thr Ala Lys Val Arg Leu Gln Val Gln Gly Glu Cys Pro
 35 40 45
 Thr Ser Ser Val Ile Arg Tyr Lys Gly Val Leu Gly Thr Ile Thr Ala
 50 55 60
 Val Val Lys Thr Glu Gly Arg Met Lys Leu Tyr Ser Gly Leu Pro Ala
 65 70 75 80
 Gly Leu Gln Arg Gln Ile Ser Ser Ala Ser Leu Arg Ile Gly Leu Tyr
 85 90 95
 Asp Thr Val Gln Glu Phe Leu Thr Ala Gly Lys Glu Thr Ala Pro Ser
 100 105 110
 Leu Gly Ser Lys Ile Leu Ala Gly Leu Thr Thr Gly Gly Val Ala Val
 115 120 125
 Phe Ile Gly Gln Pro Thr Glu Val Val Lys Val Arg Leu Gln Ala Gln
 130 135 140
 Ser His Leu His Gly Ile Lys Pro Arg Tyr Thr Gly Thr Tyr Asn Ala
 145 150 155 160
 Tyr Arg Ile Ile Ala Thr Thr Glu Gly Leu Thr Gly Leu Trp Lys Gly
 165 170 175
 Thr Thr Pro Asn Leu Met Arg Ser Val Ile Ile Asn Cys Thr Glu Leu
 180 185 190
 Val Thr Tyr Asp Leu Met Lys Glu Ala Phe Val Lys Asn Asn Ile Leu
 195 200 205
 Ala Asp Asp Val Pro Cys His Leu Val Ser Ala Leu Ile Ala Gly Phe
 210 215 220
 Cys Ala Thr Ala Met Ser Ser Pro Val Asp Val Val Lys Thr Arg Phe
 225 230 235 240
 Ile Asn Ser Pro Pro Gly Gln Tyr Lys Ser Val Pro Asn Cys Ala Met
 245 250 255
 Lys Val Phe Thr Asn Glu Gly Pro Thr Ala Phe Phe Lys Gly Leu Val
 260 265 270
 Pro Ser Phe Leu Arg Leu Gly Ser Trp Asn Val Ile Met Phe Val Cys
 275 280 285
 Phe Glu Gln Leu Lys Arg Glu Leu Ser Lys Ser Arg Gln Thr Met Asp
 290 295 300
 Cys Ala Thr
 305

<210> 89
 <211> 306
 <212> PRT
 <213> Oryzctolagus cuniculus

<400> 89
 Met Val Gly Thr Thr Thr Thr Asp Val Pro Pro Thr Met Gly Val Lys
 1 5 10 15
 Ile Phe Ser Ala Gly Val Ala Ala Cys Leu Ala Asp Val Ile Thr Phe
 20 25 30
 Pro Leu Asp Thr Ala Lys Val Arg Gln Gln Ile Gln Gly Glu Phe Pro
 35 40 45
 Ile Thr Ser Gly Ile Arg Tyr Lys Gly Val Leu Gly Thr Ile Thr Thr
 50 55 60
 Leu Ala Lys Thr Glu Gly Pro Leu Lys Leu Tyr Ser Gly Leu Pro Ala
 65 70 75 80
 Gly Leu Gln Arg Gln Ile Ser Phe Ala Ser Leu Arg Ile Gly Leu Tyr
 85 90 95
 Asp Thr Val Gln Glu Phe Phe Thr Ser Gly Glu Glu Thr Pro Ser Leu
 100 105 110
 Gly Ser Lys Ile Ser Ala Gly Leu Thr Thr Gly Gly Val Ala Val Phe
 115 120 125
 Ile Gly Gln Pro Thr Glu Val Val Lys Val Arg Leu Gln Ala Gln Ser
 130 135 140
 His Leu His Gly Leu Lys Pro Arg Tyr Thr Gly Thr Tyr Asn Ala Tyr
 145 150 155 160
 Arg Ile Ile Ala Thr Thr Glu Ser Leu Thr Ser Leu Trp Lys Gly Thr
 165 170 175
 Thr Pro Asn Leu Leu Arg Asn Val Ile Ile Asn Cys Thr Glu Leu Val
 180 185 190
 Thr Tyr Asp Leu Met Lys Gly Ala Leu Val Arg Asn Glu Ile Leu Ala
 195 200 205
 Asp Asp Val Pro Cys His Phe Val Ser Ala Leu Ile Ala Gly Phe Cys
 210 215 220
 Thr Thr Leu Leu Ser Ser Pro Val Asp Val Val Lys Thr Arg Phe Ile
 225 230 235 240
 Asn Ser Pro Pro Gly Gln Tyr Ala Ser Val Pro Asn Cys Ala Met Thr
 245 250 255
 Met Phe Thr Lys Glu Gly Pro Thr Ala Phe Phe Lys Gly Phe Val Pro

Asp Asp Val Pro Cys His Leu Leu Ser Ala Leu Ile Ala Gly Phe Cys
 210 215 220

Thr Thr Leu Leu Ser Ser Pro Val Asp Val Val Lys Thr Arg Phe Ile
 225 230 235 240

Asn Ser Pro Pro Gly Gln Tyr Ala Ser Val Pro Asn Cys Ala Met Thr
 245 250 255

Met Phe Thr Lys Glu Gly Pro Thr Ala Phe Phe Lys Gly Phe Val Pro
 260 265 270

Ser Phe Leu Arg Leu Gly Ser Trp Asp Val Ile Met Phe Val Cys Phe
 275 280 285

Glu Lys Leu Lys Gly Glu Leu Met Arg Ser Arg Gln Thr Val Asp Cys
 290 295 300

Ala Thr
 305

<210> 91

<211> 307

<212> PRT

<213> Mesocricetus auratus

<400> 91

Met Val Asn Pro Thr Thr Ser Glu Val His Pro Thr Met Gly Val Lys
 1 5 10 15

Ile Phe Ser Ala Gly Val Ala Ala Cys Leu Ala Asp Ile Ile Thr Phe
 20 25 30

Pro Leu Asp Thr Ala Lys Val Arg Leu Gln Ile Gln Gly Glu Gly Gln
 35 40 45

Ile Ser Ser Thr Ile Arg Tyr Lys Gly Val Leu Gly Thr Ile Thr Thr
 50 55 60

Leu Ala Lys Thr Glu Gly Leu Pro Lys Leu Tyr Ser Gly Leu Pro Ala
 65 70 75 80

Gly Ile Gln Arg Gln Ile Ser Phe Ala Ser Leu Arg Ile Gly Leu Tyr
 85 90 95

Asp Thr Val Gln Glu Tyr Phe Ser Ser Gly Lys Glu Thr Pro Pro Thr
 100 105 110

Leu Gly Asn Arg Ile Ser Ala Gly Leu Met Thr Gly Gly Val Ala Val
 115 120 125

Phe Ile Gly Gln Pro Thr Glu Val Val Lys Val Arg Leu Gln Ala Gln
 130 135 140

Ser His Leu His Gly Ile Lys Pro Arg Tyr Thr Gly Thr Tyr Asn Ala
 145 150 155 160

Tyr Arg Ile Ile Ala Thr Thr Glu Ser Phe Ser Thr Leu Trp Lys Gly
 165 170 175
 Thr Thr Pro Asn Leu Leu Arg Asn Val Ile Ile Asn Cys Val Glu Leu
 180 185 190
 Val Thr Tyr Asp Leu Met Lys Gly Ala Leu Val Asn Asn Gln Ile Leu
 195 200 205
 Ala Asp Asp Val Pro Cys His Leu Leu Ser Ala Phe Val Ala Gly Phe
 210 215 220
 Cys Thr Thr Phe Leu Ala Ser Pro Ala Asp Val Val Lys Thr Arg Phe
 225 230 235 240
 Ile Asn Ser Leu Pro Gly Gln Tyr Pro Ser Val Pro Ser Cys Ala Met
 245 250 255
 Thr Met Leu Thr Lys Glu Gly Pro Thr Ala Phe Phe Lys Gly Phe Val
 260 265 270
 Pro Ser Phe Leu Arg Leu Ala Ser Trp Asn Val Ile Met Phe Val Cys
 275 280 285
 Phe Glu Gln Leu Lys Lys Glu Leu Ser Lys Ser Arg Gln Thr Val Asp
 290 295 300
 Cys Thr Thr
 305

<210> 92
 <211> 96
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Mitochondrial
 carrier protein Consensus Sequence

<400> 92
 Ser Pro Leu Ser Phe Leu Ala Ser Leu Leu Ala Gly Gly Ile Ala Gly
 1 5 10 15
 Ala Ile Ala Ala Leu Val Thr Tyr Pro Leu Asp Val Val Lys Thr Arg
 20 25 30
 Leu Gln Val Gln Gly Ser Ser Ser Lys Tyr Lys Gly Ile Leu Asp Cys
 35 40 45
 Phe Lys Lys Ile Val Lys Glu Glu Gly Arg Ala Gly Leu Tyr Lys Gly
 50 55 60
 Leu Gly Pro Thr Leu Leu Arg Val Ala Pro Tyr Ala Ala Ile Tyr Phe
 65 70 75 80

Gly Thr Tyr Glu Gln Leu Lys Lys Leu Leu Gly Lys Lys Leu Gly Glu
85 90 95

<210> 93
<211> 96
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Mitochondrial
carrier protein Consensus Sequence

<400> 93
Ser Pro Leu Ser Phe Leu Ala Ser Leu Leu Ala Gly Gly Ile Ala Gly
1 5 10 15
Ala Ile Ala Ala Leu Val Thr Tyr Pro Leu Asp Val Val Lys Thr Arg
20 25 30
Leu Gln Val Gln Gly Ser Ser Ser Lys Tyr Lys Gly Ile Leu Asp Cys
35 40 45
Phe Lys Lys Ile Val Lys Glu Gly Arg Ala Gly Leu Tyr Lys Gly
50 55 60
Leu Gly Pro Thr Leu Leu Arg Val Ala Pro Tyr Ala Ala Ile Tyr Phe
65 70 75 80
Gly Thr Tyr Glu Gln Leu Lys Lys Leu Leu Gly Lys Lys Leu Gly Glu
85 90 95

<210> 94
<211> 557
<212> PRT
<213> Mus musculus

<400> 94
Met Glu Ser Glu Ser Ser Arg Arg Met Gly Asn Ala Cys Ile Pro Leu
1 5 10 15
Lys Arg Ile Ala Tyr Phe Leu Cys Leu Phe Ser Val Val Leu Leu Thr
20 25 30
Glu Gly Lys Lys Pro Ala Lys Pro Lys Cys Pro Ala Val Cys Thr Cys
35 40 45
Ser Lys Asp Asn Ala Leu Cys Glu Asn Ala Arg Ser Ile Pro Arg Thr
50 55 60

Val	Pro	Pro	Asp	Val	Ile	Ser	Leu	Ser	Phe	Val	Arg	Ser	Gly	Phe	Thr	65	70	75	80
Glu	Ile	Ser	Glu	Gly	Ser	Phe	Leu	Phe	Thr	Pro	Ser	Leu	Gln	Leu	Leu	85	90	95	
Leu	Phe	Thr	Ser	Asn	Ser	Phe	Asp	Val	Ile	Ser	Asp	Asp	Ala	Phe	Ile	100	105	110	
Gly	Leu	Pro	His	Leu	Glu	Tyr	Leu	Phe	Ile	Glu	Asn	Asn	Asn	Ile	Lys	115	120	125	
Ser	Ile	Ser	Arg	His	Thr	Phe	Arg	Gly	Leu	Lys	Ser	Leu	Ile	His	Leu	130	135	140	
Ser	Leu	Ala	Asn	Asn	Asn	Leu	Gln	Thr	Leu	Pro	Lys	Asp	Ile	Phe	Lys	145	150	155	160
Gly	Leu	Asp	Ser	Leu	Thr	Asn	Val	Asp	Leu	Arg	Gly	Asn	Ala	Phe	Asn	165	170	175	
Cys	Asp	Cys	Lys	Leu	Lys	Trp	Leu	Val	Glu	Trp	Leu	Gly	His	Thr	Asn	180	185	190	
Ala	Thr	Val	Glu	Asp	Ile	Tyr	Cys	Glu	Gly	Pro	Pro	Glu	Tyr	Lys	Lys	195	200	205	
Arg	Lys	Ile	Asn	Ser	Leu	Ser	Pro	Lys	Asp	Phe	Asp	Cys	Ile	Ile	Thr	210	215	220	
Glu	Phe	Ala	Lys	Ser	Gln	Asp	Leu	Pro	Tyr	Gln	Ser	Leu	Ser	Ile	Asp	225	230	235	240
Thr	Phe	Ser	Tyr	Leu	Asn	Asp	Glu	Tyr	Val	Val	Ile	Ala	Gln	Pro	Phe	245	250	255	
Thr	Gly	Lys	Cys	Ile	Phe	Leu	Glu	Trp	Asp	His	Val	Glu	Lys	Thr	Phe	260	265	270	
Arg	Asn	Tyr	Asp	Asn	Ile	Thr	Gly	Thr	Ser	Thr	Val	Val	Cys	Lys	Pro	275	280	285	
Ile	Val	Ile	Asp	Thr	Gln	Leu	Tyr	Val	Ile	Val	Ala	Gln	Leu	Phe	Gly	290	295	300	
Gly	Ser	His	Ile	Tyr	Lys	Arg	Asp	Gly	Phe	Ala	Asn	Lys	Phe	Ile	Lys	305	310	315	320
Ile	Gln	Asp	Ile	Glu	Val	Leu	Lys	Ile	Arg	Lys	Pro	Asn	Asp	Ile	Glu	325	330	335	
Thr	Phe	Lys	Ile	Glu	Asp	Asn	Trp	Tyr	Phe	Val	Val	Ala	Asp	Ser	Ser	340	345	350	
Lys	Ala	Gly	Phe	Thr	Thr	Ile	Tyr	Lys	Trp	Asn	Gly	Asn	Gly	Phe	Tyr	355	360	365	

Ser His Gln Ser Leu His Ala Trp Tyr Arg Asp Thr Asp Val Glu Tyr
 370 375 380
 Leu Glu Ile Ala Arg Pro Pro Leu Ala Leu Arg Thr Pro His Leu Ile
 385 390 395 400
 Leu Ser Ser Ser Ser Gln Arg Pro Val Ile Tyr Gln Trp Ser Lys Ala
 405 410 415
 Thr Gln Leu Phe Thr Asn Gln Thr Asp Ile Pro Asn Met Glu Asp Val
 420 425 430
 Tyr Ala Val Lys His Phe Ser Val Lys Gly Asp Val Tyr Ile Cys Leu
 435 440 445
 Thr Arg Phe Ile Gly Asp Ser Lys Val Met Lys Trp Gly Gly Ser Ser
 450 455 460
 Phe Gln Asp Ile Gln Arg Met Pro Ser Arg Gly Ser Met Val Phe Gln
 465 470 475 480
 Pro Leu Gln Ile Asn Asn Tyr Gln Tyr Ala Ile Leu Gly Ser Asp Tyr
 485 490 495
 Ser Phe Thr Gln Val Tyr Asn Trp Asp Ala Glu Lys Ala Lys Phe Val
 500 505 510
 Lys Phe Gln Glu Leu Asn Val Gln Ala Pro Arg Ser Phe Thr His Val
 515 520 525
 Ser Ile Asn Lys Arg Asn Phe Leu Phe Ala Ser Ser Phe Lys Gly Asn
 530 535 540
 Thr Gln Ile Tyr Lys His Val Ile Val Asp Leu Ser Ala
 545 550 555

<210> 95
 <211> 557
 <212> PRT
 <213> Homo sapiens

<400> 95
 Met Glu Ser Glu Arg Ser Lys Arg Met Gly Asn Ala Cys Ile Pro Leu
 1 5 10 15
 Lys Arg Ile Ala Tyr Phe Leu Cys Leu Leu Ser Ala Leu Leu Leu Thr
 20 25 30
 Glu Gly Lys Lys Pro Ala Lys Pro Lys Cys Pro Ala Val Cys Thr Cys
 35 40 45
 Thr Lys Asp Asn Ala Leu Cys Glu Asn Ala Arg Ser Ile Pro Arg Thr
 50 55 60
 Val Pro Pro Asp Val Ile Ser Leu Ser Phe Val Arg Ser Gly Phe Thr
 65 70 75 80

Glu	Ile	Ser	Glu	Gly	Ser	Phe	Leu	Phe	Thr	Pro	Ser	Leu	Gln	Leu	Leu	85	90	95	
Leu	Phe	Thr	Ser	Asn	Ser	Phe	Asp	Val	Ile	Ser	Asp	Asp	Ala	Phe	Ile	100	105	110	
Gly	Leu	Pro	His	Leu	Glu	Tyr	Leu	Phe	Ile	Glu	Asn	Asn	Asn	Ile	Lys	115	120	125	
Ser	Ile	Ser	Arg	His	Thr	Phe	Arg	Gly	Leu	Lys	Ser	Leu	Ile	His	Leu	130	135	140	
Ser	Leu	Ala	Asn	Asn	Asn	Leu	Gln	Thr	Leu	Pro	Lys	Asp	Ile	Phe	Lys	145	150	155	160
Gly	Leu	Asp	Ser	Leu	Thr	Asn	Val	Asp	Leu	Arg	Gly	Asn	Ser	Phe	Asn	165	170	175	
Cys	Asp	Cys	Lys	Leu	Lys	Trp	Leu	Val	Glu	Trp	Leu	Gly	His	Thr	Asn	180	185	190	
Ala	Thr	Val	Glu	Asp	Ile	Tyr	Cys	Glu	Gly	Pro	Pro	Glu	Tyr	Lys	Lys	195	200	205	
Arg	Lys	Ile	Asn	Ser	Leu	Ser	Ser	Lys	Asp	Phe	Asp	Cys	Ile	Ile	Thr	210	215	220	
Glu	Phe	Ala	Lys	Ser	Gln	Asp	Leu	Pro	Tyr	Gln	Ser	Leu	Ser	Ile	Asp	225	230	235	240
Thr	Phe	Ser	Tyr	Leu	Asn	Asp	Glu	Tyr	Val	Val	Ile	Ala	Gln	Pro	Phe	245	250	255	
Thr	Gly	Lys	Cys	Ile	Phe	Leu	Glu	Trp	Asp	His	Val	Glu	Lys	Thr	Phe	260	265	270	
Arg	Asn	Tyr	Asp	Asn	Ile	Thr	Gly	Thr	Ser	Thr	Val	Val	Cys	Lys	Pro	275	280	285	
Ile	Val	Ile	Glu	Thr	Gln	Leu	Tyr	Val	Ile	Val	Ala	Gln	Leu	Phe	Gly	290	295	300	
Gly	Ser	His	Ile	Tyr	Lys	Arg	Asp	Ser	Phe	Ala	Asn	Lys	Phe	Ile	Lys	305	310	315	320
Ile	Gln	Asp	Ile	Glu	Ile	Leu	Lys	Ile	Arg	Lys	Pro	Asn	Asp	Ile	Glu	325	330	335	
Thr	Phe	Lys	Ile	Glu	Asn	Asn	Trp	Tyr	Phe	Val	Val	Ala	Asp	Ser	Ser	340	345	350	
Lys	Ala	Gly	Phe	Thr	Thr	Ile	Tyr	Lys	Trp	Asn	Gly	Asn	Gly	Phe	Tyr	355	360	365	
Ser	His	Gln	Ser	Leu	His	Ala	Trp	Tyr	Arg	Asp	Thr	Asp	Val	Glu	Tyr	370	375	380	

Leu Glu Ile Val Arg Thr Pro Gln Thr Leu Arg Thr Pro His Leu Ile
 385 390 395 400
 Leu Ser Ser Ser Ser Gln Arg Pro Val Ile Tyr Gln Trp Asn Lys Ala
 405 410 415
 Thr Gln Leu Phe Thr Asn Gln Thr Asp Ile Pro Asn Met Glu Asp Val
 420 425 430
 Tyr Ala Val Lys His Phe Ser Val Lys Gly Asp Val Tyr Ile Cys Leu
 435 440 445
 Thr Arg Phe Ile Gly Asp Ser Lys Val Met Lys Trp Gly Gly Ser Ser
 450 455 460
 Phe Gln Asp Ile Gln Arg Met Pro Ser Arg Gly Ser Met Val Phe Gln
 465 470 475 480
 Pro Leu Gln Ile Asn Asn Tyr Gln Tyr Ala Ile Leu Gly Ser Asp Tyr
 485 490 495
 Ser Phe Thr Gln Val Tyr Asn Trp Asp Ala Glu Lys Ala Lys Phe Val
 500 505 510
 Lys Phe Gln Glu Leu Asn Val Gln Ala Pro Arg Ser Phe Thr His Val
 515 520 525
 Ser Ile Asn Lys Arg Asn Phe Leu Phe Ala Ser Ser Phe Lys Gly Asn
 530 535 540
 Thr Gln Ile Tyr Lys His Val Ile Val Asp Leu Ser Ala
 545 550 555

<210> 96
 <211> 461
 <212> PRT
 <213> Homo sapiens

<400> 96
 Leu Phe Thr Ser Asn Ser Phe Asp Val Ile Ser Asp Asp Ala Phe Ile
 1 5 10 15
 Gly Leu Pro His Leu Glu Tyr Leu Phe Ile Glu Asn Asn Asn Ile Lys
 20 25 30
 Ser Ile Ser Arg His Thr Phe Arg Gly Leu Lys Ser Leu Ile His Leu
 35 40 45
 Ser Leu Ala Asn Asn Asn Leu Gln Thr Leu Pro Lys Asp Ile Phe Lys
 50 55 60
 Gly Leu Asp Ser Leu Thr Asn Val Asp Leu Arg Gly Asn Ser Phe Asn
 65 70 75 80
 Cys Asp Cys Lys Leu Lys Trp Leu Val Glu Trp Leu Gly His Thr Asn

85										90					95				
Ala	Thr	Val	Glu	Asp	Ile	Tyr	Cys	Glu	Gly	Pro	Pro	Glu	Tyr	Lys	Lys				
			100					105					110						
Arg	Lys	Ile	Asn	Ser	Leu	Ser	Ser	Lys	Asp	Phe	Asp	Cys	Ile	Ile	Thr				
		115					120					125							
Glu	Phe	Ala	Lys	Ser	Gln	Asp	Leu	Pro	Tyr	Gln	Ser	Leu	Ser	Ile	Asp				
	130					135					140								
Thr	Phe	Ser	Tyr	Leu	Asn	Asp	Glu	Tyr	Val	Val	Ile	Ala	Gln	Pro	Phe				
145					150					155					160				
Thr	Gly	Lys	Cys	Ile	Phe	Leu	Glu	Trp	Asp	His	Val	Glu	Lys	Thr	Phe				
				165					170					175					
Arg	Asn	Tyr	Asp	Asn	Ile	Thr	Gly	Thr	Ser	Thr	Val	Val	Cys	Lys	Pro				
			180					185					190						
Ile	Val	Ile	Glu	Thr	Gln	Leu	Tyr	Val	Ile	Val	Ala	Gln	Leu	Phe	Gly				
		195					200					205							
Gly	Ser	His	Ile	Tyr	Lys	Arg	Asp	Ser	Phe	Ala	Asn	Lys	Phe	Ile	Lys				
	210					215					220								
Ile	Gln	Asp	Ile	Glu	Ile	Leu	Lys	Ile	Arg	Lys	Pro	Asn	Asp	Ile	Glu				
225					230					235					240				
Thr	Phe	Lys	Ile	Glu	Asn	Asn	Trp	Tyr	Phe	Val	Val	Ala	Asp	Ser	Ser				
				245					250					255					
Lys	Ala	Gly	Phe	Thr	Thr	Ile	Tyr	Lys	Trp	Asn	Gly	Asn	Gly	Phe	Tyr				
			260					265					270						
Ser	His	Gln	Ser	Leu	His	Ala	Trp	Tyr	Arg	Asp	Thr	Asp	Val	Glu	Tyr				
		275					280					285							
Leu	Glu	Ile	Val	Arg	Thr	Pro	Gln	Thr	Leu	Arg	Thr	Pro	His	Leu	Ile				
	290					295					300								
Leu	Ser	Ser	Ser	Ser	Gln	Arg	Pro	Val	Ile	Tyr	Gln	Trp	Asn	Lys	Ala				
305					310					315					320				
Thr	Gln	Leu	Phe	Thr	Asn	Gln	Thr	Asp	Ile	Pro	Asn	Met	Glu	Asp	Val				
				325					330					335					
Tyr	Ala	Val	Lys	His	Phe	Ser	Val	Lys	Gly	Asp	Val	Tyr	Ile	Cys	Leu				
			340					345					350						
Thr	Arg	Phe	Ile	Gly	Asp	Ser	Lys	Val	Met	Lys	Trp	Gly	Gly	Ser	Ser				
		355					360					365							
Phe	Gln	Asp	Ile	Gln	Arg	Met	Pro	Ser	Arg	Gly	Ser	Met	Val	Phe	Gln				
	370					375					380								
Pro	Leu	Gln	Ile	Asn	Asn	Tyr	Gln	Tyr	Ala	Ile	Leu	Gly	Ser	Asp	Tyr				

Gly	Pro	Pro	Glu	Tyr	Gln	Glu	Lys	Lys	Leu	Asn	Asp	Val	Thr	Ser	Phe		
		195					200					205					
Asp	Tyr	Glu	Cys	Thr	Thr	Thr	Asp	Phe	Val	Val	His	Gln	Thr	Leu	Pro		
	210					215					220						
Tyr	Gln	Ser	Val	Ser	Val	Asp	Thr	Phe	Asn	Ser	Lys	Asn	Asp	Val	Tyr		
225					230					235					240		
Val	Ala	Ile	Ala	Gln	Pro	Ser	Met	Glu	Asn	Cys	Met	Val	Leu	Glu	Trp		
				245					250					255			
Asp	His	Ile	Glu	Met	Asn	Phe	Arg	Ser	Tyr	Asp	Asn	Ile	Thr	Gly	Gln		
			260					265					270				
Ser	Ile	Val	Gly	Cys	Lys	Ala	Ile	Leu	Ile	Asp	Asp	Gln	Val	Phe	Val		
	275						280					285					
Val	Val	Ala	Gln	Leu	Phe	Gly	Gly	Ser	His	Ile	Tyr	Lys	Tyr	Asp	Glu		
	290					295					300						
Ser	Trp	Thr	Lys	Phe	Val	Lys	Phe	Gln	Asp	Ile	Glu	Val	Ser	Arg	Ile		
305					310					315					320		
Ser	Lys	Pro	Asn	Asp	Ile	Glu	Leu	Phe	Gln	Ile	Asp	Asp	Glu	Thr	Phe		
				325					330					335			
Phe	Val	Ile	Ala	Asp	Ser	Ser	Lys	Ala	Gly	Leu	Ser	Thr	Val	Tyr	Lys		
			340					345					350				
Trp	Asn	Ser	Lys	Gly	Phe	Tyr	Ser	Tyr	Gln	Ser	Leu	His	Glu	Trp	Phe		
		355					360					365					
Arg	Asp	Thr	Asp	Ala	Glu	Phe	Val	Asp	Ile	Asp	Gly	Lys	Ser	His	Leu		
	370					375					380						
Ile	Leu	Ser	Ser	Arg	Ser	Gln	Val	Pro	Ile	Ile	Leu	Gln	Trp	Asn	Lys		
385					390					395					400		
Ser	Ser	Lys	Lys	Phe	Val	Pro	His	Gly	Asp	Ile	Pro	Asn	Met	Glu	Asp		
				405					410					415			
Val	Leu	Ala	Val	Lys	Ser	Phe	Arg	Met	Gln	Asn	Thr	Leu	Tyr	Leu	Ser		
			420					425					430				
Leu	Thr	Arg	Phe	Ile	Gly	Asp	Ser	Arg	Val	Met	Arg	Trp	Asn	Ser	Lys		
		435					440					445					
Gln	Phe	Val	Glu	Ile	Gln	Ala	Leu	Pro	Ser	Arg	Gly	Ala	Met	Thr	Leu		
	450					455					460						
Gln	Pro	Phe	Ser	Phe	Lys	Asp	Asn	His	Tyr	Leu	Ala	Leu	Gly	Ser	Asp		
465					470					475					480		
Tyr	Thr	Phe	Ser	Gln	Ile	Tyr	Gln	Trp	Asp	Lys	Glu	Lys	Gln	Leu	Phe		
				485					490					495			

Lys Lys Phe Lys Glu Ile Tyr Val Gln Ala Pro Arg Ser Phe Thr Ala
500 505 510

Val Ser Thr Asp Arg Arg Asp Phe Leu Phe Ala Ser Ser Phe Lys Gly
515 520 525

Lys Thr Lys Ile Phe Glu His Ile Ile Val Asp Leu Ser Leu
530 535 540

<210> 98

<211> 1504

<212> PRT

<213> *Drosophila melanogaster*

<400> 98

Met Ala Ala Pro Ser Arg Thr Thr Leu Met Pro Pro Pro Phe Arg Leu
1 5 10 15

Gln Leu Arg Leu Leu Ile Leu Pro Ile Leu Leu Leu Leu Arg His Asp
20 25 30

Ala Val His Ala Glu Pro Tyr Ser Gly Gly Phe Gly Ser Ser Ala Val
35 40 45

Ser Ser Gly Gly Leu Gly Ser Val Gly Ile His Ile Pro Gly Gly Gly
50 55 60

Val Gly Val Ile Thr Glu Ala Arg Cys Pro Arg Val Cys Ser Cys Thr
65 70 75 80

Gly Leu Asn Val Asp Cys Ser His Arg Gly Leu Thr Ser Val Pro Arg
85 90 95

Lys Ile Ser Ala Asp Val Glu Arg Leu Glu Leu Gln Gly Asn Asn Leu
100 105 110

Thr Val Ile Tyr Glu Thr Asp Phe Gln Arg Leu Thr Lys Leu Arg Met
115 120 125

Leu Gln Leu Thr Asp Asn Gln Ile His Thr Ile Glu Arg Asn Ser Phe
130 135 140

Gln Asp Leu Val Ser Leu Glu Arg Leu Arg Leu Asn Asn Asn Arg Leu
145 150 155 160

Lys Ala Ile Pro Glu Asn Phe Val Thr Ser Ser Ala Ser Leu Leu Arg
165 170 175

Leu Asp Ile Ser Asn Asn Val Ile Thr Thr Val Gly Arg Arg Val Phe
180 185 190

Lys Gly Ala Gln Ser Leu Arg Ser Leu Gln Leu Asp Asn Asn Gln Ile
195 200 205

Thr Cys Leu Asp Glu His Ala Phe Lys Gly Leu Val Glu Leu Glu Ile
210 215 220

Leu Thr Leu Asn Asn Asn Asn Leu Thr Ser Leu Pro His Asn Ile Phe
 225 230 235 240
 Gly Gly Leu Gly Arg Leu Arg Ala Leu Arg Leu Ser Asp Asn Pro Phe
 245 250 255
 Ala Cys Asp Cys His Leu Ser Trp Leu Ser Arg Phe Leu Arg Ser Ala
 260 265 270
 Thr Arg Leu Ala Pro Tyr Thr Arg Cys Gln Ser Pro Ser Gln Leu Lys
 275 280 285
 Gly Gln Asn Val Ala Asp Leu His Asp Gln Glu Phe Lys Cys Ser Gly
 290 295 300
 Leu Thr Glu His Ala Pro Met Glu Cys Gly Ala Glu Asn Ser Cys Pro
 305 310 315 320
 His Pro Cys Arg Cys Ala Asp Gly Ile Val Asp Cys Arg Glu Lys Ser
 325 330 335
 Leu Thr Ser Val Pro Val Thr Leu Pro Asp Asp Thr Thr Asp Val Arg
 340 345 350
 Leu Glu Gln Asn Phe Ile Thr Glu Leu Pro Pro Lys Ser Phe Ser Ser
 355 360 365
 Phe Arg Arg Leu Arg Arg Ile Asp Leu Ser Asn Asn Asn Ile Ser Arg
 370 375 380
 Ile Ala His Asp Ala Leu Ser Gly Leu Lys Gln Leu Thr Thr Leu Val
 385 390 395 400
 Leu Tyr Gly Asn Lys Ile Lys Asp Leu Pro Ser Gly Val Phe Lys Gly
 405 410 415
 Leu Gly Ser Leu Gln Leu Leu Leu Leu Asn Ala Asn Glu Ile Ser Cys
 420 425 430
 Ile Arg Lys Asp Ala Phe Arg Asp Leu His Ser Leu Ser Leu Leu Ser
 435 440 445
 Leu Tyr Asp Asn Asn Ile Gln Ser Leu Ala Asn Gly Thr Phe Asp Ala
 450 455 460
 Met Lys Ser Ile Lys Thr Val His Leu Ala Lys Asn Pro Phe Ile Cys
 465 470 475 480
 Asp Cys Asn Leu Arg Trp Leu Ala Asp Tyr Leu His Lys Asn Pro Ile
 485 490 495
 Glu Thr Ser Gly Ala Arg Cys Glu Ser Pro Lys Arg Met His Arg Arg
 500 505 510
 Arg Ile Glu Ser Leu Arg Glu Glu Lys Phe Lys Cys Ser Trp Asp Glu
 515 520 525

Leu Arg Met Lys Leu Ser Gly Glu Cys Arg Met Asp Ser Asp Cys Pro
 530 535 540
 Ala Met Cys His Cys Glu Gly Thr Thr Val Asp Cys Thr Gly Arg Gly
 545 550 555 560
 Leu Lys Glu Ile Pro Arg Asp Ile Pro Leu His Thr Thr Glu Leu Leu
 565 570 575
 Leu Asn Asp Asn Glu Leu Gly Arg Ile Ser Ser Asp Gly Leu Phe Gly
 580 585 590
 Arg Leu Pro His Leu Val Lys Leu Glu Leu Lys Arg Asn Gln Leu Thr
 595 600 605
 Gly Ile Glu Pro Asn Ala Phe Glu Gly Ala Ser His Ile Gln Glu Leu
 610 615 620
 Gln Leu Gly Glu Asn Lys Ile Lys Glu Ile Ser Asn Lys Met Phe Leu
 625 630 635 640
 Gly Leu His Gln Leu Lys Thr Leu Asn Leu Tyr Asp Asn Gln Ile Ser
 645 650 655
 Cys Val Met Pro Gly Ser Phe Glu His Leu Asn Ser Leu Thr Ser Leu
 660 665 670
 Asn Leu Ala Ser Asn Pro Phe Asn Cys Asn Cys His Leu Ala Trp Phe
 675 680 685
 Ala Glu Trp Leu Arg Lys Lys Ser Leu Asn Gly Gly Ala Ala Arg Cys
 690 695 700
 Gly Ala Pro Ser Lys Val Arg Asp Val Gln Ile Lys Asp Leu Pro His
 705 710 715 720
 Ser Glu Phe Lys Cys Ser Ser Glu Asn Ser Glu Gly Cys Leu Gly Asp
 725 730 735
 Gly Tyr Cys Pro Pro Ser Cys Thr Cys Thr Gly Thr Val Val Arg Cys
 740 745 750
 Ser Arg Asn Gln Leu Lys Glu Ile Pro Arg Gly Ile Pro Ala Glu Thr
 755 760 765
 Ser Glu Leu Tyr Leu Glu Ser Asn Glu Ile Glu Gln Ile His Tyr Glu
 770 775 780
 Arg Ile Arg His Leu Arg Ser Leu Thr Arg Leu Asp Leu Ser Asn Asn
 785 790 795 800
 Gln Ile Thr Ile Leu Ser Asn Tyr Thr Phe Ala Asn Leu Thr Lys Leu
 805 810 815
 Ser Thr Leu Ile Ile Ser Tyr Asn Lys Leu Gln Cys Leu Gln Arg His
 820 825 830

Ala Leu Ser Gly Leu Asn Asn Leu Arg Val Leu Ser Leu His Gly Asn
 835 840 845

Arg Ile Ser Met Leu Pro Glu Gly Ser Phe Glu Asp Leu Lys Ser Leu
 850 855 860

Thr His Ile Ala Leu Gly Ser Asn Pro Leu Tyr Cys Asp Cys Gly Leu
 865 870 875 880

Lys Trp Phe Ser Asp Trp Ile Lys Leu Asp Tyr Val Glu Pro Gly Ile
 885 890 895

Ala Arg Cys Ala Glu Pro Glu Gln Met Lys Asp Lys Leu Ile Leu Ser
 900 905 910

Thr Pro Ser Ser Ser Phe Val Cys Arg Gly Arg Val Arg Asn Asp Ile
 915 920 925

Leu Ala Lys Cys Asn Ala Cys Phe Glu Gln Pro Cys Gln Asn Gln Ala
 930 935 940

Gln Cys Val Ala Leu Pro Gln Arg Glu Tyr Gln Cys Leu Cys Gln Pro
 945 950 955 960

Gly Tyr His Gly Lys His Cys Glu Phe Met Ile Asp Ala Cys Tyr Gly
 965 970 975

Asn Pro Cys Arg Asn Asn Ala Thr Cys Thr Val Leu Glu Glu Gly Arg
 980 985 990

Phe Ser Cys Gln Cys Ala Pro Gly Tyr Thr Gly Ala Arg Cys Glu Thr
 995 1000 1005

Asn Ile Asp Asp Cys Leu Gly Glu Ile Lys Cys Gln Asn Asn Ala Thr
 1010 1015 1020

Cys Ile Asp Gly Val Glu Ser Tyr Lys Cys Glu Cys Gln Pro Gly Phe
 1025 1030 1035 1040

Ser Gly Glu Phe Cys Asp Thr Lys Ile Gln Phe Cys Ser Pro Glu Phe
 1045 1050 1055

Asn Pro Cys Ala Asn Gly Ala Lys Cys Met Asp His Phe Thr His Tyr
 1060 1065 1070

Ser Cys Asp Cys Gln Ala Gly Phe His Gly Thr Asn Cys Thr Asp Asn
 1075 1080 1085

Ile Asp Asp Cys Gln Asn His Met Cys Gln Asn Gly Gly Thr Cys Val
 1090 1095 1100

Asp Gly Ile Asn Asp Tyr Gln Cys Arg Cys Pro Asp Asp Tyr Thr Gly
 1105 1110 1115 1120

Lys Tyr Cys Glu Gly His Asn Met Ile Ser Met Met Tyr Pro Gln Thr
 1125 1130 1135

Ser Pro Cys Gln Asn His Glu Cys Lys His Gly Val Cys Phe Gln Pro
 1140 1145 1150
 Asn Ala Gln Gly Ser Asp Tyr Leu Cys Arg Cys His Pro Gly Tyr Thr
 1155 1160 1165
 Gly Lys Trp Cys Glu Tyr Leu Thr Ser Ile Ser Phe Val His Asn Asn
 1170 1175 1180
 Ser Phe Val Glu Leu Glu Pro Leu Arg Thr Arg Pro Glu Ala Asn Val
 1185 1190 1195 1200
 Thr Ile Val Phe Ser Ser Ala Glu Gln Asn Gly Ile Leu Met Tyr Asp
 1205 1210 1215
 Gly Gln Asp Ala His Leu Ala Val Glu Leu Phe Asn Gly Arg Ile Arg
 1220 1225 1230
 Val Ser Tyr Asp Val Gly Asn His Pro Val Ser Thr Met Tyr Ser Phe
 1235 1240 1245
 Glu Met Val Ala Asp Gly Lys Tyr His Ala Val Glu Leu Leu Ala Ile
 1250 1255 1260
 Lys Lys Asn Phe Thr Leu Arg Val Asp Arg Gly Leu Ala Arg Ser Ile
 1265 1270 1275 1280
 Ile Asn Glu Gly Ser Asn Asp Tyr Leu Lys Leu Thr Thr Pro Met Phe
 1285 1290 1295
 Leu Gly Gly Leu Pro Val Asp Pro Ala Gln Gln Ala Tyr Lys Asn Trp
 1300 1305 1310
 Gln Ile Arg Asn Leu Thr Ser Phe Lys Gly Cys Met Lys Glu Val Trp
 1315 1320 1325
 Ile Asn His Lys Leu Val Asp Phe Gly Asn Ala Gln Arg Gln Gln Lys
 1330 1335 1340
 Ile Thr Pro Gly Cys Ala Leu Leu Glu Gly Glu Gln Gln Glu Glu Glu
 1345 1350 1355 1360
 Asp Asp Glu Gln Asp Phe Met Asp Glu Thr Pro His Ile Lys Glu Glu
 1365 1370 1375
 Pro Val Asp Pro Cys Leu Glu Asn Lys Cys Arg Arg Gly Ser Arg Cys
 1380 1385 1390
 Val Pro Asn Ser Asn Ala Arg Asp Gly Tyr Gln Cys Lys Cys Lys His
 1395 1400 1405
 Gly Gln Arg Gly Arg Tyr Cys Asp Gln Gly Glu Gly Ser Thr Glu Pro
 1410 1415 1420
 Pro Thr Val Thr Ala Ala Ser Thr Cys Arg Lys Glu Gln Val Arg Glu
 1425 1430 1435 1440

Tyr Tyr Thr Glu Asn Asp Cys Arg Ser Arg Gln Pro Leu Lys Tyr Ala
 1445 1450 1455
 Lys Cys Val Gly Gly Cys Gly Asn Gln Cys Cys Ala Ala Lys Ile Val
 1460 1465 1470
 Arg Arg Arg Lys Val Arg Met Val Cys Ser Asn Asn Arg Lys Tyr Ile
 1475 1480 1485
 Lys Asn Leu Asp Ile Val Arg Lys Cys Gly Cys Thr Lys Lys Cys Tyr
 1490 1495 1500

<210> 99
 <211> 51
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Leucine Rich
 Repeat C-terminal Domain Consensus Sequence

<400> 99
 Asn Pro Phe Ile Cys Asp Cys Glu Leu Arg Trp Leu Leu Arg Trp Leu
 1 5 10 15
 Gln Ala Asn Arg His Leu Gln Asp Pro Val Asp Leu Arg Cys Ala Ser
 20 25 30
 Pro Glu Ser Leu Arg Gly Pro Leu Leu Leu Leu Leu Pro Ser Ser Phe
 35 40 45
 Lys Cys Pro
 50

<210> 100
 <211> 51
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Leucine Rich
 Repeat C-terminal domain Consensus Sequence

<400> 100
 Asn Pro Phe Ile Cys Asp Cys Glu Leu Arg Trp Leu Leu Arg Trp Leu
 1 5 10 15
 Arg Glu Pro Arg Arg Leu Glu Asp Pro Glu Asp Leu Arg Cys Ala Ser
 20 25 30
 Pro Glu Ser Leu Arg Gly Pro Leu Leu Glu Leu Leu Pro Ser Asp Phe

35 40 45
 Ser Cys Pro
 50

 <210> 101
 <211> 24
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 Leucine-richrepeats Consensus Sequence

 <400> 101
 Leu Pro Asn Leu Arg Glu Leu Asp Leu Ser Asn Asn Gln Leu Ser Ser
 1 5 10 15

 Leu Pro Pro Gly Ala Phe Gln Gly
 20

 <210> 102
 <211> 199
 <212> PRT
 <213> Homo sapiens

 <400> 102
 Met Glu Thr Phe Pro Leu Leu Leu Leu Ser Leu Gly Leu Val Leu Ala
 1 5 10 15

 Glu Ala Ser Glu Ser Thr Met Lys Ile Ile Lys Glu Glu Phe Thr Asp
 20 25 30

 Glu Glu Met Gln Tyr Asp Met Ala Lys Ser Gly Gln Glu Lys Gln Thr
 35 40 45

 Ile Glu Ile Leu Met Asn Pro Ile Leu Leu Val Lys Asn Thr Ser Leu
 50 55 60

 Ser Met Ser Lys Asp Asp Met Ser Ser Thr Leu Leu Thr Phe Arg Ser
 65 70 75 80

 Leu His Tyr Asn Asp Pro Lys Gly Asn Ser Ser Gly Asn Asp Lys Glu
 85 90 95

 Cys Cys Asn Asp Met Thr Val Trp Arg Lys Val Ser Glu Ala Asn Gly
 100 105 110

 Ser Cys Lys Trp Ser Asn Asn Phe Ile Arg Ser Ser Thr Glu Val Met
 115 120 125

 Arg Arg Val His Arg Ala Pro Ser Cys Lys Phe Val Gln Asn Pro Gly
 130 135 140

 Ile Ser Cys Cys Glu Ser Leu Glu Leu Glu Asn Thr Val Cys Gln Phe

Gly Leu Thr Ala Ala Met Lys Ser Leu Asp Leu Ser Asn Asn Lys Ile
 50 55 60
 Thr Ser Ile Gly His Gly Asp Leu Arg Gly Cys Val Asn Leu Arg Ala
 65 70 75 80
 Leu Ile Leu Gln Ser Ser Gly Ile Asn Thr Ile Glu Glu Asp Ala Phe
 85 90 95
 Ser Ser Leu Ser Lys Leu Glu Tyr Leu Asp Leu Ser Asp Asn His Leu
 100 105 110
 Ser Asn Leu Ser Ser Ser Trp Phe Arg Pro Leu Ser Ser Leu Lys Tyr
 115 120 125
 Leu Asn Leu Leu Gly Asn Pro Tyr Arg Ile Leu Gly Glu Thr Pro Leu
 130 135 140
 Phe Leu Asn Leu Thr His Leu Gln Thr Leu Arg Val Gly Asn Val Ala
 145 150 155 160
 Thr Phe Ser Gly Ile Arg Arg Thr Asp Phe Ala Gly Leu Thr Ser Leu
 165 170 175
 Asp Glu Leu Glu Ile Lys Ala Leu Ser Leu Gln Asn Tyr Glu Pro Gly
 180 185 190
 Ser Leu Gln Ser Ile Gln Ser Ile His His Leu Thr Phe His Leu Ser
 195 200 205
 Gln Ser Asp Phe Leu Leu Gly Val Phe Glu Asp Thr Leu Ser Ser Val
 210 215 220
 Gly Tyr Leu Glu Leu Arg Asp Ala Asn Leu Asp Ser Phe Tyr Phe Ser
 225 230 235 240
 Glu Leu Ser Thr Asp Glu Met Asn Ser Pro Met Lys Lys Leu Ala Phe
 245 250 255
 Gln Asn Ala Asp Leu Thr Asp Glu Ser Phe Asn Glu Leu Leu Lys Leu
 260 265 270
 Leu Arg Tyr Thr Pro Glu Leu Leu Glu Val Glu Phe Asp Asp Cys Thr
 275 280 285
 Leu Asn Gly Val Gly Asp Phe Gln Pro Ser Glu Ser Asp Val Val Arg
 290 295 300
 Glu Leu Gly Lys Val Glu Thr Leu Ile Ile Arg Arg Leu His Ile Pro
 305 310 315 320
 Arg Phe Tyr Ser Phe Tyr Asp Leu Ser Thr Val Tyr Thr Leu Leu Glu
 325 330 335
 Lys Val Lys Arg Ile Thr Val Glu Asn Ser Lys Val Phe Leu Val Pro
 340 345 350

Cys Leu Phe Ser Gln His Leu Lys Ser Leu Glu Phe Leu Asp Leu Ser
 355 360 365
 Glu Asn Leu Met Val Glu Glu Tyr Leu Lys Asn Ala Ala Cys Glu Gly
 370 375 380
 Ser Trp Pro Ser Leu Gln Thr Leu Ile Leu Arg Gln Asn Arg Leu Lys
 385 390 395 400
 Ser Ile Glu Arg Thr Gly Lys Ile Leu Leu Thr Leu Lys Asn Leu Thr
 405 410 415
 Ala Leu Asp Ile Ser Arg Asn Ser Phe Gln Ser Met Pro Asp Ser Cys
 420 425 430
 Gln Trp Pro Gly Lys Met Arg Phe Leu Asn Leu Ser Ser Thr Gly Ile
 435 440 445
 Gln Ala Val Lys Met Cys Ile Pro Gln Thr Leu Glu Val Leu Asp Val
 450 455 460
 Ser Asn Asn Asn Leu Ile Ser Phe Ser Leu Phe Leu Pro Leu Leu Arg
 465 470 475 480
 Glu Leu Tyr Ile Ser Arg Asn Lys Leu His Thr Leu Pro Met Pro Pro
 485 490 495
 Cys Ser Leu Cys Tyr Trp Ser
 500

<210> 105
 <211> 567
 <212> PRT
 <213> Mus musculus

<400> 105
 Met Leu Arg Ser Ala Leu Leu Ser Ala Val Leu Ala Leu Leu Arg Ala
 1 5 10 15
 Gln Pro Phe Pro Cys Pro Lys Thr Cys Lys Cys Val Val Arg Asp Ala
 20 25 30
 Ala Gln Cys Ser Gly Gly Ser Val Ala His Ile Ala Glu Leu Gly Leu
 35 40 45
 Pro Thr Asn Leu Thr His Ile Leu Leu Phe Arg Met Asp Gln Gly Ile
 50 55 60
 Leu Arg Asn His Ser Phe Ser Gly Met Thr Val Leu Gln Arg Leu Met
 65 70 75 80
 Leu Ser Asp Ser His Ile Ser Ala Ile Asp Pro Gly Thr Phe Asn Asp
 85 90 95
 Leu Val Lys Leu Lys Thr Leu Arg Leu Thr Arg Asn Lys Ile Ser Arg

100	105	110
Leu Pro Arg Ala Ile Leu Asp Lys Met Val Leu Leu Glu Gln Leu Phe 115 120 125		
Leu Asp His Asn Ala Leu Arg Asp Leu Asp Gln Asn Leu Phe Gln Gln 130 135 140		
Leu Arg Asn Leu Gln Glu Leu Gly Leu Asn Gln Asn Gln Leu Ser Phe 145 150 155 160		
Leu Pro Ala Asn Leu Phe Ser Ser Leu Arg Glu Leu Lys Leu Leu Asp 165 170 175		
Leu Ser Arg Asn Asn Leu Thr His Leu Pro Lys Gly Leu Leu Gly Ala 180 185 190		
Gln Val Lys Leu Glu Lys Leu Leu Leu Tyr Ser Asn Gln Leu Thr Ser 195 200 205		
Val Asp Ser Gly Leu Leu Ser Asn Leu Gly Ala Leu Thr Glu Leu Arg 210 215 220		
Leu Glu Arg Asn His Leu Arg Ser Val Ala Pro Gly Ala Phe Asp Arg 225 230 235 240		
Leu Gly Asn Leu Ser Ser Leu Thr Leu Ser Gly Asn Leu Leu Glu Ser 245 250 255		
Leu Pro Pro Ala Leu Phe Leu His Val Ser Ser Val Ser Arg Leu Thr 260 265 270		
Leu Phe Glu Asn Pro Leu Glu Glu Leu Pro Asp Val Leu Phe Gly Glu 275 280 285		
Met Ala Gly Leu Arg Glu Leu Trp Leu Asn Gly Thr His Leu Ser Thr 290 295 300		
Leu Pro Ala Ala Ala Phe Arg Asn Leu Ser Gly Leu Gln Thr Leu Gly 305 310 315 320		
Leu Thr Arg Asn Pro Arg Leu Ser Ala Leu Pro Arg Gly Val Phe Gln 325 330 335		
Gly Leu Arg Glu Leu Arg Val Leu Ala Leu His Thr Asn Ala Leu Ala 340 345 350		
Glu Leu Arg Asp Asp Ala Leu Arg Gly Leu Gly His Leu Arg Gln Val 355 360 365		
Ser Leu Arg His Asn Arg Leu Arg Ala Leu Pro Arg Thr Leu Phe Arg 370 375 380		
Asn Leu Ser Ser Leu Glu Ser Val Gln Leu Glu His Asn Gln Leu Glu 385 390 395 400		
Thr Leu Pro Gly Asp Val Phe Ala Ala Leu Pro Gln Leu Thr Gln Val		

405										410					415				
Leu	Leu	Gly	His	Asn	Pro	Trp	Leu	Cys	Asp	Cys	Gly	Leu	Trp	Pro	Phe				
			420					425					430						
Leu	Gln	Trp	Leu	Arg	His	His	Pro	Asp	Ile	Leu	Gly	Arg	Asp	Glu	Pro				
		435					440					445							
Pro	Gln	Cys	Arg	Gly	Pro	Glu	Pro	Arg	Ala	Ser	Leu	Ser	Phe	Trp	Glu				
		450				455					460								
Leu	Leu	Gln	Gly	Asp	Pro	Trp	Cys	Pro	Asp	Pro	Arg	Ser	Leu	Pro	Leu				
465					470					475					480				
Asp	Pro	Pro	Thr	Glu	Asn	Ala	Leu	Glu	Ala	Pro	Val	Pro	Ser	Trp	Leu				
				485					490					495					
Pro	Asn	Ser	Trp	Gln	Ser	Gln	Thr	Trp	Ala	Gln	Leu	Val	Ala	Arg	Gly				
			500					505					510						
Glu	Ser	Pro	Asn	Asn	Arg	Leu	Tyr	Trp	Gly	Leu	Tyr	Ile	Leu	Leu	Leu				
		515					520					525							
Val	Ala	Gln	Ala	Ile	Ile	Ala	Ala	Phe	Ile	Val	Phe	Ala	Met	Ile	Lys				
		530				535					540								
Ile	Gly	Gln	Leu	Phe	Arg	Thr	Leu	Ile	Arg	Glu	Lys	Leu	Leu	Leu	Glu				
545					550					555					560				
Ala	Met	Gly	Lys	Ser	Cys	Asn													
				565															

<210> 106
 <211> 567
 <212> PRT
 <213> Mus musculus

<400> 106
 Met Leu Arg Ser Ala Leu Leu Ser Ala Val Leu Pro Leu Leu Arg Ala
 1 5 10 15
 Gln Pro Phe Pro Cys Pro Lys Thr Cys Lys Cys Val Val Arg Asp Ala
 20 25 30
 Ala Gln Cys Ser Gly Gly Ser Val Ala His Ile Ala Glu Leu Gly Leu
 35 40 45
 Pro Thr Asn Leu Thr His Ile Leu Leu Phe Arg Met Asp Gln Gly Ile
 50 55 60
 Leu Arg Asn His Ser Phe Ser Gly Met Thr Val Leu Gln Arg Gln Met
 65 70 75 80
 Leu Ser Asp Ser His Ile Ser Ala Ile Asp Pro Gly Thr Phe Asn Asp
 85 90 95

Leu Val Lys Leu Lys Thr Leu Arg Leu Thr Arg Asn Lys Ile Ser Arg
 100 105 110

Leu Pro Arg Ala Ile Leu Asp Lys Met Val Leu Leu Glu Gln Leu Phe
 115 120 125

Leu Asp His Asn Ala Leu Arg Asp Leu Asp Gln Asn Leu Phe Gln Gln
 130 135 140

Leu Arg Asn Leu Gln Glu Leu Gly Leu Asn Gln Asn Gln Leu Ser Phe
 145 150 155 160

Leu Pro Ala Asn Leu Phe Ser Ser Leu Arg Glu Leu Lys Leu Leu Asp
 165 170 175

Leu Ser Arg Asn Asn Leu Thr His Leu Pro Lys Gly Leu Leu Gly Ala
 180 185 190

Gln Val Lys Leu Glu Lys Leu Leu Leu Tyr Ser Asn Gln Leu Thr Ser
 195 200 205

Val Asp Ser Gly Leu Leu Ser Asn Leu Gly Ala Leu Thr Glu Leu Arg
 210 215 220

Leu Glu Arg Asn His Leu Arg Ser Val Ala Pro Gly Ala Phe Asp Arg
 225 230 235 240

Leu Gly Asn Leu Ser Ser Leu Thr Leu Ser Gly Asn Leu Leu Glu Ser
 245 250 255

Leu Pro Pro Ala Leu Phe Leu His Val Ser Ser Val Ser Arg Leu Thr
 260 265 270

Leu Phe Glu Asn Pro Leu Glu Glu Leu Pro Asp Val Leu Phe Gly Glu
 275 280 285

Met Ala Gly Leu Arg Glu Leu Trp Leu Asn Gly Thr His Leu Ser Thr
 290 295 300

Leu Pro Ala Ala Ala Phe Arg Asn Leu Ser Gly Leu Gln Thr Leu Gly
 305 310 315 320

Leu Thr Arg Asn Pro Arg Leu Ser Ala Leu Pro Arg Gly Val Phe Gln
 325 330 335

Gly Leu Arg Glu Leu Arg Val Leu Gly Leu His Thr Asn Ala Leu Ala
 340 345 350

Glu Leu Arg Asp Asp Ala Leu Arg Gly Leu Gly His Leu Arg Gln Val
 355 360 365

Ser Leu Arg His Asn Arg Leu Arg Ala Leu Pro Arg Thr Leu Phe Arg
 370 375 380

Asn Leu Ser Ser Leu Glu Ser Val Gln Leu Glu His Asn Gln Leu Glu
 385 390 395 400

Thr Leu Pro Gly Asp Val Phe Ala Ala Leu Pro Gln Leu Thr Gln Val
 405 410 415
 Leu Leu Gly His Asn Pro Trp Leu Cys Asp Cys Gly Leu Trp Arg Phe
 420 425 430
 Leu Gln Trp Leu Arg His His Pro Asp Ile Leu Gly Arg Asp Glu Pro
 435 440 445
 Pro Gln Cys Arg Gly Pro Glu Pro Arg Ala Ser Leu Ser Phe Trp Glu
 450 455 460
 Leu Leu Gln Gly Asp Pro Trp Cys Pro Asp Pro Arg Ser Leu Pro Leu
 465 470 475 480
 Asp Pro Pro Thr Glu Asn Ala Leu Glu Ala Pro Val Pro Ser Trp Leu
 485 490 495
 Pro Asn Ser Trp Gln Ser Gln Thr Trp Ala Gln Leu Val Ala Arg Gly
 500 505 510
 Glu Ser Pro Asn Asn Arg Leu Tyr Trp Gly Leu Tyr Ile Leu Leu Leu
 515 520 525
 Val Ala Gln Ala Ile Ile Ala Ala Phe Ile Val Phe Ala Met Ile Lys
 530 535 540
 Ile Gly Gln Leu Phe Arg Thr Leu Ile Arg Glu Lys Leu Leu Leu Glu
 545 550 555 560
 Ala Met Gly Lys Ser Cys Asn
 565

<210> 107
 <211> 661
 <212> PRT
 <213> Mus musculus

<400> 107
 Met Ala Pro Asp Ile Ser Cys Phe Phe Leu Val Ala Leu Phe Leu Ala
 1 5 10 15
 Ser Cys Arg Ala Thr Thr Ser Ser Asp Gln Lys Cys Ile Glu Lys Glu
 20 25 30
 Val Asn Lys Thr Tyr Asn Cys Glu Asn Leu Gly Leu Asn Glu Ile Pro
 35 40 45
 Gly Thr Leu Pro Asn Ser Thr Glu Cys Leu Glu Phe Ser Phe Asn Val
 50 55 60
 Leu Pro Thr Ile Gln Asn Thr Thr Phe Ser Arg Leu Ile Asn Leu Thr
 65 70 75 80
 Phe Leu Asp Leu Thr Arg Cys Gln Ile Tyr Trp Ile His Glu Asp Thr
 85 90 95

Phe	Gln	Ser	Gln	His	Arg	Leu	Asp	Thr	Leu	Val	Leu	Thr	Ala	Asn	Pro	100	105	110
Leu	Ile	Phe	Met	Ala	Glu	Thr	Ala	Leu	Ser	Gly	Pro	Lys	Ala	Leu	Lys	115	120	125
His	Leu	Phe	Phe	Ile	Gln	Thr	Gly	Ile	Ser	Ser	Ile	Asp	Phe	Ile	Pro	130	135	140
Leu	His	Asn	Gln	Lys	Thr	Leu	Glu	Ser	Leu	Tyr	Leu	Gly	Ser	Asn	His	145	150	155
Ile	Ser	Ser	Ile	Lys	Leu	Pro	Lys	Gly	Phe	Pro	Thr	Glu	Lys	Leu	Lys	165	170	175
Val	Leu	Asp	Phe	Gln	Asn	Asn	Ala	Ile	His	Tyr	Leu	Ser	Lys	Glu	Asp	180	185	190
Met	Ser	Ser	Leu	Gln	Gln	Ala	Thr	Asn	Leu	Ser	Leu	Asn	Leu	Asn	Gly	195	200	205
Asn	Asp	Ile	Ala	Gly	Ile	Glu	Pro	Gly	Ala	Phe	Asp	Ser	Ala	Val	Phe	210	215	220
Gln	Ser	Leu	Asn	Phe	Gly	Gly	Thr	Gln	Asn	Leu	Leu	Val	Ile	Phe	Lys	225	230	235
Gly	Leu	Lys	Asn	Ser	Thr	Ile	Gln	Ser	Leu	Trp	Leu	Gly	Thr	Phe	Glu	245	250	255
Asp	Met	Asp	Asp	Glu	Asp	Ile	Ser	Pro	Ala	Val	Phe	Glu	Gly	Leu	Cys	260	265	270
Glu	Met	Ser	Val	Glu	Ser	Ile	Asn	Leu	Gln	Lys	His	Tyr	Phe	Phe	Asn	275	280	285
Ile	Ser	Ser	Asn	Thr	Phe	His	Cys	Phe	Ser	Gly	Leu	Gln	Glu	Leu	Asp	290	295	300
Leu	Thr	Ala	Thr	His	Leu	Ser	Glu	Leu	Pro	Ser	Gly	Leu	Val	Gly	Leu	305	310	315
Ser	Thr	Leu	Lys	Lys	Leu	Val	Leu	Ser	Ala	Asn	Lys	Phe	Glu	Asn	Leu	325	330	335
Cys	Gln	Ile	Ser	Ala	Ser	Asn	Phe	Pro	Ser	Leu	Thr	His	Leu	Ser	Ile	340	345	350
Lys	Gly	Asn	Thr	Lys	Arg	Leu	Glu	Leu	Gly	Thr	Gly	Cys	Leu	Glu	Asn	355	360	365
Leu	Glu	Asn	Leu	Arg	Glu	Leu	Asp	Leu	Ser	His	Asp	Asp	Ile	Glu	Thr	370	375	380
Ser	Asp	Cys	Cys	Asn	Leu	Gln	Leu	Arg	Asn	Leu	Ser	His	Leu	Gln	Ser	385	390	395

Leu Asn Leu Ser Tyr Asn Glu Pro Leu Ser Leu Lys Thr Glu Ala Phe
 405 410 415
 Lys Glu Cys Pro Gln Leu Glu Leu Leu Asp Leu Ala Phe Thr Arg Leu
 420 425 430
 Lys Val Lys Asp Ala Gln Ser Pro Phe Gln Asn Leu His Leu Leu Lys
 435 440 445
 Val Leu Asn Leu Ser His Ser Leu Leu Asp Ile Ser Ser Glu Gln Leu
 450 455 460
 Phe Asp Gly Leu Pro Ala Leu Gln His Leu Asn Leu Gln Gly Asn His
 465 470 475 480
 Phe Pro Lys Gly Asn Ile Gln Lys Thr Asn Ser Leu Gln Thr Leu Gly
 485 490 495
 Arg Leu Glu Ile Leu Val Leu Ser Phe Cys Asp Leu Ser Ser Ile Asp
 500 505 510
 Gln His Ala Phe Thr Ser Leu Lys Met Met Asn His Val Asp Leu Ser
 515 520 525
 His Asn Arg Leu Thr Ser Ser Ser Ile Glu Ala Leu Ser His Leu Lys
 530 535 540
 Gly Ile Tyr Leu Asn Leu Ala Ser Asn His Ile Ser Ile Ile Leu Pro
 545 550 555 560
 Ser Leu Leu Pro Ile Leu Ser Gln Gln Arg Thr Ile Asn Leu Arg Gln
 565 570 575
 Asn Pro Leu Asp Cys Thr Cys Ser Asn Ile Tyr Phe Leu Glu Trp Tyr
 580 585 590
 Lys Glu Asn Met Gln Lys Leu Glu Asp Thr Glu Asp Thr Leu Cys Glu
 595 600 605
 Asn Pro Pro Leu Leu Arg Gly Val Arg Leu Ser Asp Val Thr Leu Ser
 610 615 620
 Cys Ser Met Ala Ala Val Gly Ile Phe Phe Leu Ile Val Phe Leu Leu
 625 630 635 640
 Val Phe Ala Ile Leu Leu Ile Phe Ala Val Lys Tyr Phe Leu Arg Trp
 645 650 655
 Lys Tyr Gln His Ile
 660

<210> 108
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 108

Val	Thr	Leu	Ser	Pro	Lys	Asp	Cys	Gln	Val	Phe	Arg	Ser	Asp	His	Gly
1				5					10					15	
Ser	Ser	Ile	Ser	Cys	Gln	Pro	Pro	Ala	Glu	Ile	Pro	Gly	Tyr	Leu	Pro
			20					25					30		
Ala	Asp	Thr	Val	His	Leu	Ala	Val	Glu	Phe	Phe	Asn	Leu	Thr	His	Leu
		35					40					45			
Pro	Ala	Asn	Leu	Leu	Gln	Gly	Ala	Ser	Lys	Leu	Gln	Glu	Leu	His	Leu
	50					55					60				
Ser	Ser	Asn	Gly	Leu	Glu	Ser	Leu	Ser	Pro	Glu	Phe	Leu	Arg	Pro	Val
65					70					75					80
Pro	Gln	Leu	Arg	Val	Leu	Asp	Leu	Thr	Arg	Asn	Ala	Leu	Thr	Gly	Leu
				85					90					95	
Pro	Pro	Gly	Leu	Phe	Gln	Ala	Ser	Ala	Thr	Leu	Asp	Thr	Leu	Val	Leu
			100					105					110		
Lys	Glu	Asn	Gln	Leu	Glu	Val	Leu	Glu	Val	Ser	Trp	Leu	His	Gly	Leu
		115					120					125			
Lys	Ala	Leu	Gly	His	Leu	Asp	Leu	Ser	Gly	Asn	Arg	Leu	Arg	Lys	Leu
	130					135					140				
Pro	Pro	Gly	Leu	Leu	Ala	Asn	Phe	Thr	Leu	Leu	Arg	Thr	Leu	Asp	Leu
145					150					155					160
Gly	Glu	Asn	Gln	Leu	Glu	Thr	Leu	Pro	Pro	Asp	Leu	Leu	Arg	Gly	Pro
				165					170					175	
Leu	Gln	Leu	Glu	Arg	Leu	His	Leu	Glu	Gly	Asn	Lys	Leu	Gln	Val	Leu
			180					185					190		
Gly	Lys	Asp	Leu	Leu	Leu	Pro	Gln	Pro	Asp	Leu	Arg	Tyr	Leu	Phe	Leu
		195					200					205			
Asn	Gly	Asn	Lys	Leu	Ala	Arg	Val	Ala	Ala	Gly	Ala	Phe	Gln	Gly	Leu
	210					215					220				
Arg	Gln	Leu	Asp	Met	Leu	Asp	Leu	Ser	Asn	Asn	Ser	Leu	Ala	Ser	Val
225					230					235					240
Pro	Glu	Gly	Leu	Trp	Ala	Ser	Leu	Gly	Gln	Pro	Asn	Trp	Asp	Met	Arg
				245					250					255	
Asp	Gly	Phe	Asp	Ile	Ser	Gly	Asn	Pro	Trp	Ile	Cys	Asp	Gln	Asn	Leu
			260					265					270		
Ser	Asp	Leu	Tyr	Arg	Trp	Leu	Gln	Ala	Gln	Lys	Asp	Lys	Met	Phe	Ser
		275					280					285			
Gln	Asn	Asp	Thr	Arg	Cys	Ala	Gly	Pro	Glu	Ala	Val	Lys	Gly	Gln	Thr

290

295

300

Leu Leu Ala Val Ala Lys Ser Gln
305 310

<210> 109

<211> 141

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: TIR Domain
Consensus Sequence

<400> 109

Ala Phe Ile Ser Phe Ser Gly Lys Asp Asp Arg Asp Thr Phe Val Ser
1 5 10 15

His Leu Leu Lys Glu Leu Glu Glu Lys Pro Gly Ile Lys Leu Phe Ile
20 25 30

Asp Asp Arg Asp Glu Leu Pro Gly Glu Ser Ile Leu Glu Asn Leu Phe
35 40 45

Glu Ala Ile Glu Lys Ser Arg Arg Ala Ile Val Ile Leu Ser Ser Asn
50 55 60

Tyr Ala Ser Ser Ser Trp Cys Leu Asp Glu Leu Val Glu Ala Val Lys
65 70 75 80

Leu Ala Leu Glu Gln Gly Asn Lys Lys Val Ile Leu Pro Ile Phe Tyr
85 90 95

Lys Val Asp Pro Ser Asp Val Arg Lys Gln Ser Gly Lys Phe Gly Lys
100 105 110

Ala Phe Leu Lys Thr Leu Lys Trp Phe Gly Asp Lys Thr Ser Gln Arg
115 120 125

Ile Arg Phe Trp Lys Lys Ala Leu Tyr Ala Met Pro Val
130 135 140

<210> 110

<211> 1242

<212> PRT

<213> Homo sapiens

<400> 110

Met Asp Glu Lys Val Asn Ile Thr Val Cys Gly Glu Tyr Thr Tyr Gly
1 5 10 15

Lys Pro Val Pro Gly Leu Ala Thr Val Ser Leu Cys Arg Lys Leu Ser
20 25 30

Arg Val Leu Asn Cys Asp Lys Gln Glu Val Cys Glu Glu Phe Ser Gln

35					40					45					
Gln	Leu	Asn	Ser	Asn	Gly	Cys	Ile	Thr	Gln	Gln	Val	His	Thr	Lys	Met
	50					55					60				
Leu	Gln	Ile	Thr	Asn	Thr	Gly	Phe	Glu	Met	Lys	Leu	Arg	Val	Glu	Ala
65					70					75					80
Arg	Ile	Arg	Glu	Glu	Gly	Thr	Asp	Leu	Glu	Val	Thr	Ala	Asn	Arg	Ile
			85						90					95	
Ser	Glu	Ile	Thr	Asn	Ile	Val	Ser	Lys	Leu	Lys	Phe	Val	Lys	Val	Asp
			100					105					110		
Ser	His	Phe	Arg	Gln	Gly	Ile	Pro	Phe	Phe	Ala	Gln	Val	Leu	Leu	Val
		115					120					125			
Asp	Gly	Lys	Gly	Val	Pro	Ile	Pro	Asn	Lys	Leu	Phe	Phe	Ile	Ser	Val
	130					135					140				
Asn	Asp	Ala	Asn	Tyr	Tyr	Ser	Asn	Ala	Thr	Thr	Asn	Glu	Gln	Gly	Leu
145					150					155					160
Ala	Gln	Phe	Ser	Ile	Asn	Thr	Thr	Ser	Ile	Ser	Val	Asn	Lys	Leu	Phe
				165					170					175	
Val	Arg	Val	Phe	Thr	Val	His	Pro	Asn	Leu	Cys	Phe	His	Tyr	Ser	Trp
			180					185					190		
Val	Ala	Glu	Asp	His	Gln	Gly	Ala	Gln	His	Thr	Ala	Asn	Arg	Val	Phe
		195					200					205			
Ser	Leu	Ser	Gly	Ser	Tyr	Ile	His	Leu	Glu	Pro	Val	Ala	Gly	Thr	Leu
	210					215					220				
Pro	Cys	Gly	His	Thr	Glu	Thr	Ile	Thr	Ala	His	Tyr	Thr	Leu	Asn	Arg
225					230					235					240
Gln	Ala	Met	Gly	Glu	Leu	Ser	Glu	Leu	Ser	Phe	His	Tyr	Leu	Ile	Met
				245					250					255	
Ala	Lys	Gly	Val	Ile	Val	Arg	Ser	Gly	Thr	His	Thr	Leu	Pro	Val	Glu
			260					265					270		
Ser	Gly	Asp	Met	Lys	Gly	Ser	Phe	Ala	Leu	Ser	Phe	Pro	Val	Glu	Ser
		275					280					285			
Asp	Val	Ala	Pro	Ile	Ala	Arg	Met	Phe	Ile	Phe	Ala	Ile	Leu	Pro	Asp
	290					295					300				
Gly	Glu	Val	Val	Gly	Asp	Ser	Glu	Lys	Phe	Glu	Ile	Glu	Asn	Cys	Leu
305					310					315					320
Ala	Asn	Lys	Val	Asp	Leu	Ser	Phe	Ser	Pro	Ala	Gln	Ser	Pro	Pro	Ala
				325					330					335	
Ser	His	Ala	His	Leu	Gln	Val	Ala	Ala	Ala	Pro	Gln	Ser	Leu	Cys	Ala

340					345					350					
Leu	Arg	Ala	Val	Asp	Gln	Ser	Val	Leu	Leu	Met	Lys	Pro	Glu	Ala	Glu
		355					360					365			
Leu	Ser	Val	Ser	Ser	Val	Tyr	Asn	Leu	Leu	Thr	Val	Lys	Asp	Leu	Thr
		370				375					380				
Asn	Phe	Pro	Asp	Asn	Val	Asp	Gln	Gln	Glu	Glu	Glu	Gln	Gly	His	Cys
385					390					395					400
Pro	Arg	Pro	Phe	Phe	Ile	His	Asn	Gly	Ala	Ile	Tyr	Val	Pro	Leu	Ser
				405					410					415	
Ser	Asn	Glu	Ala	Asp	Ile	Tyr	Ser	Phe	Leu	Lys	Gly	Met	Gly	Leu	Lys
			420					425					430		
Val	Phe	Thr	Asn	Ser	Lys	Ile	Arg	Lys	Pro	Lys	Ser	Cys	Ser	Val	Ile
		435					440					445			
Pro	Ser	Val	Ser	Ala	Gly	Ala	Val	Gly	Gln	Gly	Tyr	Tyr	Gly	Ala	Gly
		450				455					460				
Leu	Gly	Val	Val	Glu	Arg	Pro	Tyr	Val	Pro	Gln	Leu	Gly	Thr	Tyr	Asn
465					470					475					480
Val	Ile	Pro	Leu	Asn	Asn	Glu	Gln	Ser	Ser	Gly	Pro	Val	Pro	Glu	Thr
				485					490					495	
Val	Arg	Ser	Tyr	Phe	Pro	Glu	Thr	Trp	Ile	Trp	Glu	Leu	Val	Ala	Val
			500					505					510		
Asn	Ser	Ser	Gly	Val	Ala	Glu	Val	Gly	Val	Thr	Val	Pro	Asp	Thr	Ile
		515					520					525			
Thr	Glu	Trp	Lys	Ala	Gly	Ala	Phe	Cys	Leu	Ser	Glu	Asp	Ala	Gly	Leu
		530				535					540				
Gly	Ile	Ser	Ser	Thr	Ala	Ser	Leu	Arg	Ala	Phe	Gln	Pro	Phe	Phe	Val
545					550					555					560
Glu	Leu	Thr	Met	Pro	Tyr	Ser	Val	Ile	Arg	Gly	Glu	Val	Phe	Thr	Leu
			565						570					575	
Lys	Ala	Thr	Val	Leu	Asn	Tyr	Leu	Pro	Lys	Cys	Ile	Arg	Val	Ser	Val
			580					585					590		
Gln	Leu	Lys	Ala	Ser	Pro	Ala	Phe	Leu	Ala	Ser	Gln	Asn	Thr	Lys	Gly
		595					600					605			
Glu	Glu	Ser	Tyr	Cys	Ile	Cys	Gly	Asn	Glu	Arg	Gln	Thr	Leu	Ser	Trp
		610				615					620				
Thr	Val	Thr	Pro	Lys	Thr	Leu	Gly	Asn	Val	Asn	Phe	Ser	Val	Ser	Ala
625					630					635					640
Glu	Ala	Met	Gln	Ser	Leu	Glu	Leu	Cys	Gly	Asn	Glu	Val	Val	Glu	Val

645										650					655				
Pro	Glu	Ile	Lys	Arg	Lys	Asp	Thr	Val	Ile	Lys	Thr	Leu	Leu	Val	Glu				
			660					665					670						
Ala	Glu	Gly	Ile	Glu	Gln	Glu	Lys	Thr	Phe	Ser	Ser	Met	Thr	Cys	Ala				
		675					680					685							
Ser	Gly	Ala	Asn	Val	Ser	Glu	Gln	Leu	Ser	Leu	Lys	Leu	Pro	Ser	Asn				
	690					695					700								
Val	Val	Lys	Glu	Ser	Ala	Arg	Ala	Ser	Phe	Ser	Val	Leu	Gly	Asp	Ile				
705					710					715					720				
Leu	Gly	Ser	Ala	Met	Gln	Asn	Ile	Gln	Asn	Leu	Leu	Gln	Met	Pro	Tyr				
				725				730						735					
Gly	Cys	Gly	Glu	Gln	Asn	Met	Val	Leu	Phe	Ala	Pro	Asn	Ile	Tyr	Val				
			740					745					750						
Leu	Asn	Tyr	Leu	Asn	Glu	Thr	Gln	Gln	Leu	Thr	Gln	Glu	Ile	Lys	Ala				
		755					760					765							
Lys	Ala	Val	Gly	Tyr	Leu	Ile	Thr	Gly	Tyr	Gln	Arg	Gln	Leu	Asn	Tyr				
	770					775					780								
Lys	His	Gln	Asp	Gly	Ser	Tyr	Ser	Thr	Phe	Gly	Glu	Arg	Tyr	Gly	Arg				
785					790					795					800				
Asn	Gln	Gly	Asn	Thr	Trp	Leu	Thr	Ala	Phe	Val	Leu	Lys	Thr	Phe	Ala				
				805					810					815					
Gln	Ala	Arg	Ser	Tyr	Ile	Phe	Ile	Asp	Glu	Ala	His	Ile	Thr	Gln	Ser				
			820					825					830						
Leu	Thr	Trp	Leu	Ser	Gln	Met	Gln	Lys	Asp	Asn	Gly	Cys	Phe	Arg	Ser				
		835					840					845							
Ser	Gly	Ser	Leu	Leu	Asn	Asn	Ala	Ile	Lys	Gly	Gly	Val	Glu	Asp	Glu				
	850					855					860								
Ala	Thr	Leu	Ser	Ala	Tyr	Val	Thr	Ile	Ala	Leu	Leu	Glu	Ile	Pro	Leu				
865					870					875					880				
Pro	Val	Thr	Asn	Pro	Ile	Val	Arg	Asn	Ala	Leu	Phe	Cys	Leu	Glu	Ser				
				885					890					895					
Ala	Trp	Asn	Val	Ala	Lys	Glu	Gly	Thr	His	Gly	Ser	His	Val	Tyr	Thr				
			900					905					910						
Lys	Ala	Leu	Leu	Ala	Tyr	Ala	Phe	Ser	Leu	Leu	Gly	Lys	Gln	Asn	Gln				
	915						920					925							
Asn	Arg	Glu	Ile	Leu	Asn	Ser	Leu	Asp	Lys	Glu	Ala	Val	Lys	Glu	Asp				
	930					935					940								
Asn	Leu	Val	His	Trp	Glu	Arg	Pro	Gln	Arg	Pro	Lys	Ala	Pro	Val	Gly				

945		950		955		960
His Leu Tyr Gln Thr Gln Ala Pro Ser Ala Glu Val Glu Met Thr Ser						
		965		970		975
Tyr Val Leu Leu Ala Tyr Leu Thr Ala Gln Pro Ala Pro Thr Ser Gly						
		980		985		990
Asp Leu Thr Ser Ala Thr Asn Ile Val Lys Trp Ile Met Lys Gln Gln						
		995		1000		1005
Asn Ala Gln Gly Gly Phe Ser Ser Thr Gln Asp Thr Val Val Ala Leu						
		1010		1015		1020
His Ala Leu Ser Arg Tyr Gly Ala Ala Thr Phe Thr Arg Thr Glu Lys						
		1025		1030		1035
						1040
Thr Ala Gln Val Thr Val Gln Asp Ser Gln Thr Phe Ser Thr Asn Phe						
		1045		1050		1055
Gln Val Asp Asn Asn Asn Leu Leu Leu Leu Gln Gln Ile Ser Leu Pro						
		1060		1065		1070
Glu Leu Pro Gly Glu Tyr Val Ile Thr Val Thr Gly Glu Arg Cys Val						
		1075		1080		1085
Tyr Leu Gln Thr Ser Met Lys Tyr Asn Ile Leu Pro Glu Lys Glu Asp						
		1090		1095		1100
Ser Pro Phe Ala Leu Lys Val Gln Thr Val Pro Gln Thr Cys Asp Gly						
		1105		1110		1115
						1120
His Lys Ala His Thr Ser Phe Gln Ile Ser Leu Thr Ile Ser Tyr Thr						
		1125		1130		1135
Gly Asn Arg Pro Ala Ser Asn Met Val Ile Val Asp Val Lys Met Val						
		1140		1145		1150
Ser Gly Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu Glu Arg Ser						
		1155		1160		1165
Ser Ser Val Ser Arg Thr Glu Val Ser Asn Asn His Val Leu Ile Tyr						
		1170		1175		1180
Val Glu Gln Val Thr Asn Gln Thr Leu Ser Phe Ser Phe Met Val Leu						
		1185		1190		1195
						1200
Gln Asp Ile Pro Val Gly Asp Leu Lys Pro Ala Ile Val Lys Val Tyr						
		1205		1210		1215
Asp Tyr Tyr Glu Thr Asp Glu Ser Val Val Ala Glu Tyr Ile Ala Pro						
		1220		1225		1230
Cys Ser Thr Asp Thr Glu His Gly Asn Val						
		1235		1240		

<210> 111
 <211> 1495
 <212> PRT
 <213> Mus musculus

<400> 111

Met	Arg	Arg	Asn	Gln	Leu	Pro	Thr	Pro	Ala	Phe	Leu	Leu	Leu	Phe	Leu
1				5					10					15	
Leu	Leu	Pro	Arg	Asp	Ala	Thr	Thr	Ala	Thr	Ala	Lys	Pro	Gln	Tyr	Val
			20					25					30		
Val	Leu	Val	Pro	Ser	Glu	Val	Tyr	Gln	Glu	Ser	Leu	Lys	Arg	Pro	Cys
		35					40					45			
Val	Ser	Leu	Asn	His	Val	Asn	Glu	Thr	Val	Met	Leu	Ser	Leu	Thr	Leu
	50					55					60				
Glu	Tyr	Ala	Met	Gln	Gln	Thr	Lys	Leu	Leu	Thr	Asp	Gln	Ala	Val	Asp
65					70					75					80
Lys	Asp	Ser	Phe	Tyr	Cys	Ser	Pro	Phe	Thr	Ile	Ser	Gly	Ser	Pro	Leu
				85					90					95	
Pro	Tyr	Thr	Phe	Ile	Thr	Val	Glu	Ile	Lys	Gly	Pro	Thr	Gln	Arg	Phe
			100					105					110		
Ile	Lys	Lys	Lys	Ser	Ile	Gln	Ile	Ile	Lys	Ala	Glu	Ser	Pro	Val	Phe
		115					120					125			
Val	Gln	Thr	Asp	Lys	Pro	Ile	Tyr	Lys	Pro	Gly	Gln	Ile	Val	Lys	Phe
	130					135					140				
Arg	Val	Val	Ser	Val	Asp	Ile	Ser	Phe	Arg	Pro	Leu	Asn	Glu	Thr	Phe
145					150					155					160
Pro	Val	Val	Tyr	Ile	Glu	Thr	Pro	Lys	Arg	Asn	Arg	Ile	Phe	Gln	Trp
				165				170						175	
Gln	Asn	Ile	His	Leu	Ala	Gly	Gly	Leu	His	Gln	Leu	Ser	Phe	Pro	Leu
			180					185					190		
Ser	Val	Glu	Pro	Ala	Leu	Gly	Ile	Tyr	Lys	Val	Val	Val	Gln	Lys	Asp
		195					200					205			
Ser	Gly	Lys	Lys	Ile	Glu	His	Ser	Phe	Glu	Val	Lys	Glu	Tyr	Val	Leu
	210					215					220				
Pro	Lys	Phe	Glu	Val	Ile	Ile	Lys	Met	Gln	Lys	Thr	Met	Ala	Phe	Leu
225					230					235					240
Glu	Glu	Glu	Leu	Pro	Ile	Thr	Ala	Cys	Gly	Val	Tyr	Thr	Tyr	Gly	Lys
				245					250					255	
Pro	Val	Pro	Gly	Leu	Val	Thr	Leu	Arg	Val	Cys	Arg	Lys	Tyr	Ser	Arg
			260					265					270		

Tyr	Arg	Ser	Thr	Cys	His	Asn	Gln	Asn	Ser	Met	Ser	Ile	Cys	Ala	Glu	275	280	285
Phe	Ser	Gln	Gln	Ala	Asp	Asp	Lys	Gly	Cys	Phe	Ser	Gln	Val	Val	Lys	290	295	300
Thr	Lys	Val	Phe	Gln	Leu	Ser	Gln	Lys	Gly	His	Asp	Met	Lys	Ile	Glu	305	310	315
Val	Glu	Ala	Lys	Ile	Lys	Glu	Glu	Gly	Thr	Gly	Ile	Glu	Leu	Thr	Gly	325	330	335
Ile	Gly	Ser	Cys	Glu	Ile	Ala	Asn	Ala	Leu	Ser	Lys	Leu	Lys	Phe	Thr	340	345	350
Lys	Val	Asn	Thr	Asn	Tyr	Arg	Pro	Gly	Leu	Pro	Phe	Ser	Gly	Gln	Val	355	360	365
Leu	Leu	Val	Asp	Glu	Lys	Gly	Lys	Pro	Ile	Pro	Asn	Lys	Asn	Ile	Thr	370	375	380
Ser	Val	Val	Ser	Pro	Leu	Gly	Tyr	Leu	Ser	Ile	Phe	Thr	Thr	Asp	Glu	385	390	395
His	Gly	Leu	Ala	Asn	Ile	Ser	Ile	Asp	Thr	Ser	Asn	Phe	Thr	Ala	Pro	405	410	415
Phe	Leu	Arg	Val	Val	Val	Thr	Tyr	Lys	Gln	Asn	His	Val	Cys	Tyr	Asp	420	425	430
Asn	Trp	Trp	Leu	Asp	Glu	Phe	His	Thr	Gln	Ala	Asp	His	Ser	Ala	Thr	435	440	445
Leu	Val	Phe	Ser	Pro	Ser	Gln	Ser	Tyr	Ile	Gln	Leu	Glu	Leu	Val	Phe	450	455	460
Gly	Thr	Leu	Ala	Cys	Gly	Gln	Thr	Gln	Glu	Ile	Arg	Ile	His	Tyr	Leu	465	470	475
Leu	Asn	Glu	Asp	Ile	Met	Lys	Asn	Glu	Lys	Thr	Leu	Thr	Phe	Tyr	Tyr	485	490	495
Leu	Ile	Lys	Ala	Arg	Gly	Ser	Ile	Gly	Asn	Leu	Gly	Ser	His	Val	Leu	500	505	510
Ser	Leu	Glu	Gln	Gly	Asn	Met	Lys	Gly	Val	Phe	Ser	Leu	Pro	Ile	Gln	515	520	525
Val	Glu	Pro	Gly	Met	Ala	Pro	Glu	Ala	Gln	Leu	Leu	Ile	Tyr	Ala	Ile	530	535	540
Leu	Pro	Asn	Glu	Glu	Leu	Val	Ala	Asp	Ala	Gln	Asn	Phe	Glu	Ile	Glu	545	550	555
Lys	Cys	Phe	Ala	Asn	Lys	Val	Asn	Leu	Ser	Phe	Pro	Ser	Ala	Gln	Ser	565	570	575

Leu Pro Ala Ser Asp Thr His Leu Lys Val Lys Ala Ala Pro Leu Ser
 580 585 590
 Leu Cys Ala Leu Thr Ala Val Asp Gln Ser Val Leu Leu Leu Lys Pro
 595 600 605
 Glu Ala Lys Leu Ser Pro Gln Ser Ile Tyr Asn Leu Leu Pro Gly Lys
 610 615 620
 Thr Val Gln Gly Ala Phe Phe Gly Val Pro Val Tyr Lys Asp His Glu
 625 630 635 640
 Asn Cys Ile Ser Gly Glu Asp Ile Thr His Asn Gly Ile Val Tyr Thr
 645 650 655
 Pro Lys His Ser Leu Gly Asp Asn Asp Ala His Ser Ile Phe Gln Ser
 660 665 670
 Val Gly Ile Asn Ile Phe Thr Asn Ser Lys Ile His Lys Pro Arg Phe
 675 680 685
 Cys Gln Glu Phe Gln His Tyr Pro Ala Met Gly Gly Val Ala Pro Gln
 690 695 700
 Ala Leu Ala Val Ala Ala Ser Gly Pro Gly Ser Ser Phe Arg Ala Met
 705 710 715 720
 Gly Val Pro Met Met Gly Leu Asp Tyr Ser Asp Glu Ile Asn Gln Val
 725 730 735
 Val Glu Val Arg Glu Thr Val Arg Lys Tyr Phe Pro Glu Thr Trp Ile
 740 745 750
 Trp Asp Leu Val Pro Leu Asp Val Ser Gly Asp Gly Glu Leu Ala Val
 755 760 765
 Lys Val Pro Asp Thr Ile Thr Glu Trp Lys Ala Ser Ala Phe Cys Leu
 770 775 780
 Ser Gly Thr Thr Gly Leu Gly Ser Ser Ser Thr Ile Ser Leu Gln Ala
 785 790 795 800
 Phe Gln Pro Phe Phe Leu Glu Leu Thr Leu Pro Tyr Ser Val Val Arg
 805 810 815
 Gly Glu Ala Phe Thr Leu Lys Ala Thr Val Leu Asn Tyr Met Ser His
 820 825 830
 Cys Ile Gln Ile Arg Val Asp Leu Glu Ile Ser Pro Asp Phe Leu Ala
 835 840 845
 Val Pro Val Gly Gly His Glu Asn Ser His Cys Ile Cys Gly Asn Glu
 850 855 860
 Arg Lys Thr Val Ser Trp Ala Val Thr Pro Lys Ser Leu Gly Glu Val
 865 870 875 880

Asn Phe Thr Arg Thr Ala Glu Ala Leu Glu Ser Gln Glu Leu Cys Gly
 885 890 895
 Asn Lys Leu Thr Glu Val Pro Ala Leu Val His Lys Asp Thr Val Val
 900 905 910
 Lys Ser Val Ile Val Glu Pro Glu Gly Ile Glu Lys Glu Gln Thr Tyr
 915 920 925
 Asn Thr Leu Leu Cys Pro Gln Asp Thr Glu Leu Gln Asp Asn Ser Ser
 930 935 940
 Leu Glu Leu Pro Pro Asn Val Val Glu Gly Ser Ala Arg Ala Thr His
 945 950 955 960
 Ser Val Leu Gly Asp Ile Leu Gly Ser Ala Met Gln Asn Leu Gln Asn
 965 970 975
 Leu Leu Gln Met Pro Tyr Gly Cys Gly Glu Gln Asn Met Val Leu Phe
 980 985 990
 Val Pro Asn Ile Tyr Val Leu Asn Tyr Leu Asn Glu Thr Gln Gln Leu
 995 1000 1005
 Thr Glu Ala Ile Lys Ser Lys Ala Ile Asn Tyr Leu Ile Ser Gly Tyr
 1010 1015 1020
 Gln Arg Gln Leu Asn Tyr Gln His Ser Asp Gly Ser Tyr Ser Thr Phe
 1025 1030 1035 1040
 Gly Asn His Gly Gly Gly Asn Thr Pro Gly Asn Thr Trp Leu Thr Ala
 1045 1050 1055
 Phe Val Leu Lys Ala Phe Ala Gln Ala Gln Ser His Ile Phe Ile Glu
 1060 1065 1070
 Lys Thr His Ile Thr Asn Ala Phe Asn Trp Leu Ser Met Lys Gln Lys
 1075 1080 1085
 Glu Asn Gly Cys Phe Gln Gln Ser Gly Tyr Leu Leu Asn Asn Ala Met
 1090 1095 1100
 Lys Gly Gly Val Asp Asp Glu Val Thr Leu Ser Ala Tyr Ile Thr Ile
 1105 1110 1115 1120
 Ala Leu Leu Glu Met Pro Leu Pro Val Thr His Ser Ala Val Arg Asn
 1125 1130 1135
 Ala Leu Phe Cys Leu Glu Thr Ala Trp Ala Ser Ile Ser Gln Ser Gln
 1140 1145 1150
 Glu Ser His Val Tyr Thr Lys Ala Leu Leu Ala Tyr Ala Phe Ala Leu
 1155 1160 1165
 Ala Gly Asn Lys Ala Lys Arg Ser Glu Leu Leu Glu Ser Leu Asn Lys
 1170 1175 1180

Asp Ala Val Lys Glu Glu Asp Ser Leu His Trp Gln Arg Pro Gly Asp
 1185 1190 1195 1200
 Val Gln Lys Val Lys Ala Leu Ser Phe Tyr Gln Pro Arg Ala Pro Ser
 1205 1210 1215
 Ala Glu Val Glu Met Thr Ala Tyr Val Leu Leu Ala Tyr Leu Thr Ser
 1220 1225 1230
 Glu Ser Ser Arg Pro Thr Arg Asp Leu Ser Ser Ser Asp Leu Ser Thr
 1235 1240 1245
 Ala Ser Lys Ile Val Lys Trp Ile Ser Lys Gln Gln Asn Ser Asp Gly
 1250 1255 1260
 Gly Leu Leu Leu Thr Gln Asp Thr Val Val Ala Leu Gln Ala Leu Ser
 1265 1270 1275 1280
 Lys Tyr Gly Ser Ala Thr Phe Thr Arg Ser Gln Lys Glu Val Leu Val
 1285 1290 1295
 Thr Ser Arg Ser Ser Gly Thr Phe Ser Lys Thr Phe His Val Asn Ser
 1300 1305 1310
 Gly Asn Arg Leu Leu Leu Gln Glu Val Arg Leu Pro Asp Leu Pro Gly
 1315 1320 1325
 Asn Tyr Val Thr Lys Gly Ser Gly Ser Gly Cys Val Tyr Leu Gln Thr
 1330 1335 1340
 Ser Leu Lys Tyr Asn Ile Leu Pro Val Ala Asp Gly Lys Ala Pro Phe
 1345 1350 1355 1360
 Ala Leu Gln Val Asn Thr Leu Pro Leu Asn Phe Asp Lys Ala Glu Asp
 1365 1370 1375
 His Arg Thr Phe Gln Ile Arg Ile Asn Val Ser Tyr Thr Gly Glu Arg
 1380 1385 1390
 Pro Ser Ser Asn Met Val Ile Val Asp Val Lys Met Val Ser Gly Phe
 1395 1400 1405
 Ile Pro Met Lys Pro Ser Val Lys Arg Leu Gln Asp Gln Pro Asn Ile
 1410 1415 1420
 Gln Arg Thr Glu Val Asn Thr Asn His Val Leu Ile Tyr Ile Glu Lys
 1425 1430 1435 1440
 Leu Thr Asn Gln Thr Leu Gly Phe Ser Phe Ala Val Glu Gln Asp Ile
 1445 1450 1455
 Pro Val Lys Asn Leu Lys Pro Ala Pro Ile Lys Val Tyr Asp Tyr Tyr
 1460 1465 1470
 Glu Thr Asp Glu Phe Thr Val Glu Glu Tyr Ser Ala Pro Phe Ser Asp
 1475 1480 1485

Gly Ser Glu Gln Gly Asn Ala
 1490 1495

<210> 112
 <211> 1473
 <212> PRT
 <213> Gallus gallus

<400> 112
 Met His Cys Phe Leu Gly Arg Glu Ile Leu Ser Phe Phe Cys Leu Thr
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 Val Arg Lys Met Trp Leu Lys Phe Ile Leu Ala Ile Leu Leu Leu His
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 Ala Ala Ala Gly Lys Glu Pro Glu Pro Gln Tyr Val Leu Met Val Pro
 35 40 45
 Ala Val Leu Gln Ser Asp Ser Pro Ser Gln Val Cys Leu Gln Phe Phe
 50 55 60
 Asn Leu Asn Gln Thr Ile Ser Val Arg Val Val Leu Glu Tyr Asp Thr
 65 70 75 80
 Ile Asn Thr Thr Ile Phe Glu Lys Asn Thr Thr Thr Ser Asn Gly Leu
 85 90 95
 Gln Cys Leu Asn Phe Met Ile Pro Pro Val Thr Ser Val Ser Leu Ala
 100 105 110
 Phe Ile Ser Phe Thr Ala Lys Gly Thr Thr Phe Asp Leu Lys Glu Arg
 115 120 125
 Arg Ser Val Met Ile Trp Asn Met Glu Ser Phe Val Phe Val Gln Thr
 130 135 140
 Asp Lys Pro Ile Tyr Lys Pro Gly Gln Ser Val Met Phe Arg Val Val
 145 150 155 160
 Ala Leu Asp Phe Asn Phe Lys Pro Val Gln Glu Met Tyr Pro Leu Ile
 165 170 175
 Ala Val Gln Asp Pro Gln Asn Asn Arg Ile Phe Gln Trp Gln Asn Val
 180 185 190
 Thr Ser Glu Ile Asn Ile Val Gln Ile Glu Phe Pro Leu Thr Glu Glu
 195 200 205
 Pro Ile Leu Gly Asn Tyr Lys Ile Ile Val Thr Lys Lys Ser Gly Glu
 210 215 220
 Arg Thr Ser His Ser Phe Leu Val Glu Glu Tyr Val Leu Pro Lys Phe
 225 230 235 240
 Asp Val Thr Val Thr Ala Pro Gly Ser Leu Thr Val Met Asp Ser Glu
 245 250 255

Leu Thr Val Lys Ile Cys Ala Val Tyr Thr Tyr Gly Gln Pro Val Glu
 260 265 270
 Gly Lys Val Gln Leu Ser Val Cys Arg Asp Phe Asp Ser Tyr Gly Arg
 275 280 285
 Cys Lys Lys Ser Pro Val Cys Gln Ser Phe Thr Lys Asp Leu Asp Thr
 290 295 300
 Asp Gly Cys Leu Ser His Ile Leu Ser Ser Lys Val Phe Glu Leu Asn
 305 310 315 320
 Arg Ile Gly Tyr Lys Arg Asn Leu Asp Val Lys Ala Ile Val Thr Glu
 325 330 335
 Lys Glu Gln Val Cys Asn Leu Thr Ala Thr Gln Ser Ile Ser Ile Thr
 340 345 350
 Gln Val Met Ser Ser Leu Gln Phe Glu Asn Val Asp His His Tyr Arg
 355 360 365
 Arg Gly Ile Pro Tyr Phe Gly Gln Ile Lys Leu Val Asp Lys Asp Asn
 370 375 380
 Ser Pro Ile Ser Asn Lys Val Ile Gln Leu Phe Val Asn Asn Lys Asn
 385 390 395 400
 Thr His Asn Phe Thr Thr Asp Ile Asn Gly Ile Ala Pro Phe Ser Ile
 405 410 415
 Asp Thr Ser Lys Ile Phe Asp Pro Glu Leu Ser Leu Lys Ala Leu Tyr
 420 425 430
 Lys Thr Ser Asp Gln Cys His Ser Glu Gly Trp Ile Glu Pro Ser Tyr
 435 440 445
 Pro Asp Ala Ser Leu Ser Val Gln Arg Leu Tyr Ser Trp Thr Ser Ser
 450 455 460
 Phe Val Arg Ile Glu Pro Leu Trp Lys Asp Met Ser Cys Gly Gln Lys
 465 470 475 480
 Arg Met Ile Thr Val Tyr Tyr Ile Leu Asn Thr Glu Gly Tyr Glu His
 485 490 495
 Ile Asn Ile Val Asn Phe Tyr Tyr Val Gly Met Ala Lys Gly Lys Ile
 500 505 510
 Val Leu Thr Gly Glu Ile Lys Val Asn Ile Gln Ala Asp Gln Asn Gly
 515 520 525
 Thr Phe Met Ile Pro Leu Val Val Asn Glu Lys Met Ala Pro Ala Leu
 530 535 540
 Arg Leu Leu Val Tyr Met Leu His Pro Ala Lys Glu Leu Val Ala Asp
 545 550 555 560

Ser Val Arg Phe Ser Ile Glu Lys Cys Phe Lys Asn Lys Val Gln Leu
 565 570 575
 Gln Phe Ser Glu Lys Gln Met Leu Thr Thr Ser Asn Val Ser Leu Val
 580 585 590
 Ile Glu Ala Ala Ala Asn Ser Phe Cys Ala Val Arg Ala Val Asp Lys
 595 600 605
 Ser Met Leu Leu Leu Lys Ser Glu Thr Glu Leu Ser Ala Glu Thr Ile
 610 615 620
 Tyr Asn Leu His Pro Ile Gln Asp Leu Gln Gly Tyr Ile Phe Asn Gly
 625 630 635 640
 Leu Asn Leu Glu Asp Asp Pro Gln Asp Pro Cys Val Ser Ser Asp Asp
 645 650 655
 Ile Phe His Lys Gly Leu Tyr Tyr Arg Pro Leu Thr Ser Gly Leu Gly
 660 665 670
 Pro Asp Val Tyr Gln Phe Leu Arg Asp Met Gly Met Lys Phe Phe Thr
 675 680 685
 Asn Ser Lys Ile Arg Gln Pro Thr Val Cys Thr Arg Glu Thr Val Arg
 690 695 700
 Pro Pro Ser Tyr Phe Leu Asn Ala Gly Phe Thr Ala Ser Thr His His
 705 710 715 720
 Val Lys Leu Ser Ala Glu Val Ala Arg Glu Glu Arg Gly Lys Arg His
 725 730 735
 Ile Leu Glu Thr Ile Arg Glu Phe Phe Pro Glu Thr Trp Ile Trp Asp
 740 745 750
 Ile Ile Leu Ile Asn Ser Thr Gly Lys Ala Ser Val Ser Tyr Thr Ile
 755 760 765
 Pro Asp Thr Ile Thr Glu Trp Lys Ala Ser Ala Phe Cys Val Glu Glu
 770 775 780
 Leu Ala Gly Phe Gly Met Ser Val Pro Ala Thr Leu Thr Ala Phe Gln
 785 790 795 800
 Pro Phe Phe Val Asp Leu Thr Leu Pro Tyr Ser Ile Ile His Gly Glu
 805 810 815
 Asp Phe Leu Val Arg Ala Asn Val Phe Asn Tyr Leu Asn His Cys Ile
 820 825 830
 Lys Ile Asn Val Leu Leu Leu Glu Ser Leu Asp Tyr Gln Ala Lys Leu
 835 840 845
 Ile Ser Pro Glu Asp Asp Gly Cys Val Cys Ala Lys Ile Arg Lys Ser
 850 855 860

Tyr Val Trp Asn Ile Phe Pro Lys Gly Thr Gly Asp Val Leu Phe Ser
 865 870 875 880
 Ile Thr Ala Glu Thr Asn Asp Asp Glu Ala Cys Glu Glu Glu Ala Leu
 885 890 895
 Arg Asn Ile Arg Ile Asp Tyr Arg Asp Thr Gln Ile Arg Ala Leu Leu
 900 905 910
 Val Glu Pro Glu Gly Ile Arg Arg Glu Glu Thr Gln Asn Phe Leu Ile
 915 920 925
 Cys Met Lys Asp Asp Val Ile Ser Gln Asp Val Ala Ile Asp Leu Pro
 930 935 940
 Thr Asn Val Val Glu Gly Ser Pro Arg Pro Ser Phe Ser Val Val Gly
 945 950 955 960
 Asp Ile Met Gly Thr Ala Ile Gln Asn Val His Gln Leu Leu Gln Met
 965 970 975
 Pro Phe Gly Asn Gly Glu Gln Asn Met Val Leu Phe Ala Pro Asn Ile
 980 985 990
 Tyr Val Leu Asp Tyr Leu Asp Lys Thr Arg Gln Leu Ser Glu Asp Val
 995 1000 1005
 Lys Ser Lys Thr Ile Gly Tyr Leu Val Ser Gly Tyr Gln Lys Gln Leu
 1010 1015 1020
 Ser Tyr Lys His Pro Asp Gly Ser Tyr Ser Thr Phe Gly Ile Arg Asp
 1025 1030 1035 1040
 Lys Glu Gly Asn Thr Trp Leu Thr Ala Phe Val Tyr Lys Ser Phe Ala
 1045 1050 1055
 Glu Ala Ser Arg Phe Ile Tyr Ile Asp Asp Asn Val Gln Ala Gln Thr
 1060 1065 1070
 Leu Ile Trp Leu Ala Thr Lys Gln Lys Thr Asp Gly Cys Phe Gln Ser
 1075 1080 1085
 Thr Gly Ile Leu Val Asn Asn Ala Met Lys Gly Gly Val Glu Asn Glu
 1090 1095 1100
 Leu Ser Leu Ser Ala Tyr Ile Thr Ile Ala Leu Leu Glu Ala Gly His
 1105 1110 1115 1120
 Ser Met Ser His Thr Val Ile Arg Asn Ala Phe Tyr Cys Leu Glu Thr
 1125 1130 1135
 Ala Ser Glu Lys Asn Ile Thr Asp Ile Tyr Thr Gln Ala Leu Val Ala
 1140 1145 1150
 Tyr Ala Phe Cys Leu Ala Gly Lys Ala Glu Ile Cys Glu Ser Phe Leu
 1155 1160 1165

Arg Glu Leu Gln Lys Ser Ala Lys Glu Val Asp Gly Ser Lys Tyr Trp
 1170 1175 1180

Glu Gln Asn Gln Arg Ser Ala Pro Glu Lys Ser His Leu Leu Asp His
 1185 1190 1195 1200

Val Gln Ser Thr Asp Val Glu Ile Thr Ser Tyr Val Leu Leu Ala Leu
 1205 1210 1215

Leu Tyr Lys Pro Asn Arg Ser Gln Glu Asp Leu Thr Lys Ala Ser Ala
 1220 1225 1230

Ile Val Gln Trp Ile Ile Arg Gln Gln Asn Ser Tyr Gly Gly Phe Ala
 1235 1240 1245

Ser Met Gln Asp Thr Val Val Ala Leu Gln Ala Leu Ala Ala Tyr Gly
 1250 1255 1260

Ala Ala Thr Tyr Asn Ser Val Thr Gln Asn Val Ile Lys Ile Asn Ser
 1265 1270 1275 1280

Lys Asn Thr Phe Glu Lys Val Phe Thr Val Asn Asn Glu Asn Arg Leu
 1285 1290 1295

Leu Leu Gln Gln Thr Pro Leu Pro Gln Val Pro Gly Lys Tyr Ser Leu
 1300 1305 1310

Thr Val Asn Gly Thr Gly Cys Val Leu Ile Gln Thr Ala Leu Arg Tyr
 1315 1320 1325

Asn Ile His Leu Pro Glu Gly Ala Phe Gly Phe Ser Leu Ser Val Gln
 1330 1335 1340

Thr Ser Asn Ala Ser Cys Pro Arg Asp Gln Pro Gly Lys Phe Asp Ile
 1345 1350 1355 1360

Val Leu Ile Ser Ser Tyr Thr Gly Lys Arg Ser Ser Ser Asn Met Val
 1365 1370 1375

Ile Ile Asp Val Lys Met Leu Ser Gly Phe Val Pro Val Lys Ser Ser
 1380 1385 1390

Leu Asp Gln Leu Ile Asp Asp His Thr Val Met Gln Val Glu Tyr Lys
 1395 1400 1405

Lys Asn His Val Leu Leu Tyr Leu Gly Asn Ile Leu Gln Lys Arg Arg
 1410 1415 1420

Lys Glu Val Thr Phe Ser Val Glu Gln Asp Phe Val Val Thr His Pro
 1425 1430 1435 1440

Lys Pro Ala Pro Val Gln Ile Tyr Asp Tyr Tyr Glu Thr Glu Glu Tyr
 1445 1450 1455

Ala Val Ala Glu Tyr Met Ser Leu Cys Arg Gly Val Val Glu Glu Met
 1460 1465 1470

Gly

<210> 113
<211> 1450
<212> PRT
<213> Homo sapiens

<400> 113
Ser Val Ser Gly Lys Pro Gln Tyr Met Val Leu Val Pro Ser Leu Leu
1 5 10 15
His Thr Glu Thr Thr Glu Lys Gly Cys Val Leu Leu Ser Tyr Leu Asn
20 25 30
Glu Thr Val Thr Val Ser Ala Leu Glu Ser Val Arg Gly Asn Arg Ser
35 40 45
Leu Phe Thr Asp Leu Glu Ala Glu Asn Asp Val Leu His Cys Val Ala
50 55 60
Phe Ala Val Pro Lys Ser Ser Ser Asn Glu Glu Val Met Phe Leu Thr
65 70 75 80
Val Gln Val Lys Gly Pro Thr Gln Glu Phe Lys Lys Arg Thr Thr Val
85 90 95
Met Val Lys Asn Glu Asp Ser Leu Val Phe Val Gln Thr Asp Lys Ser
100 105 110
Ile Tyr Lys Pro Gly Gln Thr Val Lys Phe Arg Val Val Ser Met Asp
115 120 125
Glu Asn Phe His Pro Leu Asn Glu Leu Ile Pro Leu Val Tyr Ile Gln
130 135 140
Asp Pro Lys Gly Asn Arg Ile Ala Gln Trp Gln Ser Phe Gln Leu Glu
145 150 155 160
Gly Gly Leu Lys Gln Phe Ser Phe Pro Leu Ser Ser Glu Pro Phe Gln
165 170 175
Gly Ser Tyr Lys Val Val Val Gln Lys Lys Ser Gly Gly Arg Thr Glu
180 185 190
His Pro Phe Thr Val Glu Glu Phe Val Leu Pro Lys Phe Glu Val Gln
195 200 205
Val Thr Val Pro Lys Ile Ile Thr Ile Leu Glu Glu Glu Met Asn Val
210 215 220
Ser Val Cys Gly Leu Tyr Thr Tyr Gly Lys Pro Val Pro Gly His Val
225 230 235 240
Thr Val Ser Ile Cys Arg Lys Tyr Ser Asp Ala Ser Asp Cys His Gly

545		550		555		560
Leu Arg Val Thr	Ala Ala Pro Gln Ser Val Cys Ala Leu Arg Ala Val					
	565		570		575	
Asp Gln Ser Val	Leu Leu Met Lys Pro Asp Ala Glu Leu Ser Ala Ser					
	580		585		590	
Ser Val Tyr Asn	Leu Leu Pro Glu Lys Asp Leu Thr Gly Phe Pro Gly					
	595		600		605	
Pro Leu Asn Asp	Gln Asp Asp Glu Asp Cys Ile Asn Arg His Asn Val					
	610		615		620	
Tyr Ile Asn Gly	Ile Thr Tyr Thr Pro Val Ser Ser Thr Asn Glu Lys					
	625		630		635	640
Asp Met Tyr Ser	Phe Leu Glu Asp Met Gly Leu Lys Ala Phe Thr Asn					
	645		650		655	
Ser Lys Ile Arg	Lys Pro Lys Met Cys Pro Gln Leu Gln Gln Tyr Glu					
	660		665		670	
Met His Gly Pro	Glu Gly Leu Arg Val Gly Phe Tyr Glu Ser Asp Val					
	675		680		685	
Met Gly Arg Gly	His Ala Arg Leu Val His Val Glu Glu Pro His Thr					
	690		695		700	
Glu Thr Val Arg	Lys Tyr Phe Pro Glu Thr Trp Ile Trp Asp Leu Val					
	705		710		715	720
Val Val Asn Ser	Ala Gly Val Ala Glu Val Gly Val Thr Val Pro Asp					
	725		730		735	
Thr Ile Thr Glu	Trp Lys Ala Gly Ala Phe Cys Leu Ser Glu Asp Ala					
	740		745		750	
Gly Leu Gly Ile	Ser Ser Thr Ala Ser Leu Arg Ala Phe Gln Pro Phe					
	755		760		765	
Phe Val Glu Leu	Thr Met Pro Tyr Ser Val Ile Arg Gly Glu Ala Phe					
	770		775		780	
Thr Leu Lys Ala	Thr Val Leu Asn Tyr Leu Pro Lys Cys Ile Arg Val					
	785		790		795	800
Ser Val Gln Leu	Glu Ala Ser Pro Ala Phe Leu Ala Val Pro Val Glu					
	805		810		815	
Lys Glu Gln Ala	Pro His Cys Ile Cys Ala Asn Gly Arg Gln Thr Val					
	820		825		830	
Ser Trp Ala Val	Thr Pro Lys Ser Leu Gly Asn Val Asn Phe Thr Val					
	835		840		845	
Ser Ala Glu Ala	Leu Glu Ser Gln Glu Leu Cys Gly Thr Glu Val Pro					

850	855	860
Ser Val Pro Glu His Gly Arg Lys Asp Thr Val Ile Lys Pro Leu Leu 865 870 875 880		
Val Glu Pro Glu Gly Leu Glu Lys Glu Thr Thr Phe Asn Ser Leu Leu 885 890 895		
Cys Pro Ser Gly Gly Glu Val Ser Glu Glu Leu Ser Leu Lys Leu Pro 900 905 910		
Pro Asn Val Val Glu Glu Ser Ala Arg Ala Ser Val Ser Val Leu Gly 915 920 925		
Asp Ile Leu Gly Ser Ala Met Gln Asn Thr Gln Asn Leu Leu Gln Met 930 935 940		
Pro Tyr Gly Cys Gly Glu Glx Asn Met Val Leu Phe Ala Pro Asn Ile 945 950 955 960		
Tyr Val Leu Asp Tyr Leu Asn Glu Thr Gln Gln Leu Thr Pro Glu Ile 965 970 975		
Lys Ser Lys Ala Ile Gly Tyr Leu Asn Thr Gly Tyr Gln Arg Gln Leu 980 985 990		
Asn Tyr Lys His Tyr Asp Gly Ser Tyr Ser Thr Phe Gly Glu Arg Tyr 995 1000 1005		
Gly Arg Asn Gln Gly Asn Thr Trp Leu Thr Ala Phe Val Leu Lys Thr 1010 1015 1020		
Phe Ala Gln Ala Arg Ala Tyr Ile Phe Ile Asp Glu Ala His Ile Thr 1025 1030 1035 1040		
Gln Ala Leu Ile Trp Leu Ser Gln Arg Gln Lys Asp Asn Gly Cys Phe 1045 1050 1055		
Arg Ser Ser Gly Ser Leu Leu Asn Asn Ala Ile Lys Gly Gly Val Glu 1060 1065 1070		
Asp Glu Val Thr Leu Ser Ala Tyr Ile Lys Ile Ala Leu Leu Glu Ile 1075 1080 1085		
Pro Leu Thr Val Thr His Pro Val Val Arg Asn Ala Leu Phe Cys Leu 1090 1095 1100		
Glu Ser Ala Trp Lys Thr Ala Glu Glu Gly Asp His Gly Ser His Val 1105 1110 1115 1120		
Tyr Thr Lys Ala Leu Leu Ala Tyr Ala Phe Ala Leu Ala Gly Asn Gln 1125 1130 1135		
Asp Lys Arg Lys Glu Val Leu Lys Ser Leu Asn Glu Glu Ala Val Lys 1140 1145 1150		
Lys Asp Asn Ser Val His Trp Glu Arg Pro Gln Lys Pro Lys Ala Pro		

1155	1160	1165
Val Gly His Phe Tyr Glu Pro Gln Ala Pro Ser Ala Glu Val Glu Met 1170 1175 1180		
Thr Ser Tyr Val Leu Leu Ala Tyr Leu Thr Ala Gln Pro Ala Pro Thr 1185 1190 1195 1200		
Ser Glu Asp Leu Thr Ser Ala Thr Asn Ile Val Lys Trp Ile Thr Lys 1205 1210 1215		
Gln Gln Asn Ala Gln Gly Gly Phe Ser Ser Thr Gln Asp Lys Val Val 1220 1225 1230		
Ala Leu His Ala Leu Ser Lys Tyr Gly Ala Ala Thr Phe Thr Arg Thr 1235 1240 1245		
Gly Lys Ala Ala Gln Val Thr Ile Gln Ser Ser Gly Thr Phe Ser Ser 1250 1255 1260		
Lys Phe Gln Val Asp Asn Asn Asn Arg Leu Leu Leu Gln Gln Val Ser 1265 1270 1275 1280		
Leu Pro Glu Leu Pro Gly Glu Tyr Ser Met Lys Val Thr Gly Glu Gly 1285 1290 1295		
Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu Lys 1300 1305 1310		
Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr Leu Pro Gln Thr Cys 1315 1320 1325		
Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu Ser Val Ser 1330 1335 1340		
Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile Val Asp Val Lys 1345 1350 1355 1360		
Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu Glu 1365 1370 1375		
Arg Ser Asn His Val Ser Arg Thr Glu Val Ser Ser Asn His Val Leu 1380 1385 1390		
Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr Leu Ser Leu Phe Phe Thr 1395 1400 1405		
Val Leu Gln Asp Val Pro Val Arg Asp Leu Lys Pro Ala Ile Val Lys 1410 1415 1420		
Val Tyr Asp Tyr Tyr Glu Thr Asp Glu Phe Ala Ile Ala Glu Tyr Asn 1425 1430 1435 1440		
Ala Pro Cys Ser Lys Asp Leu Gly Asn Ala 1445 1450		

<210> 114
 <211> 1476
 <212> PRT
 <213> Mus musculus

<400> 114

Met	Trp	Lys	Ser	Arg	Arg	Ala	Gln	Leu	Cys	Leu	Phe	Ser	Val	Leu	Leu
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Ala	Phe	Leu	His	Ser	Ala	Ser	Leu	Leu	Asn	Gly	Asp	Ser	Lys	Tyr	Met
			20					25					30		
Val	Leu	Val	Pro	Ser	Gln	Leu	Tyr	Thr	Glu	Thr	Pro	Glu	Lys	Ile	Cys
		35					40					45			
Leu	His	Leu	Tyr	Gln	Leu	Asn	Glu	Thr	Val	Thr	Val	Thr	Ala	Ser	Leu
	50					55					60				
Val	Ser	Gln	Ser	Gly	Arg	Lys	Asn	Leu	Phe	Asp	Glu	Leu	Val	Leu	Asp
	65				70					75					80
Lys	Asp	Leu	Phe	Gln	Cys	Val	Ser	Phe	Ile	Ile	Pro	Arg	Leu	Ser	Ser
				85					90					95	
Ser	Asp	Glu	Glu	Asp	Phe	Leu	Tyr	Val	Asp	Ile	Lys	Gly	Pro	Thr	His
			100					105					110		
Glu	Phe	Ser	Lys	Arg	Lys	Ala	Val	Leu	Val	Lys	Asn	Lys	Glu	Ser	Val
		115					120					125			
Val	Phe	Val	Gln	Thr	Asp	Lys	Pro	Val	Tyr	Lys	Pro	Gly	Gln	Ser	Val
	130					135					140				
Lys	Phe	Arg	Val	Val	Ser	Met	Asp	Lys	Met	Leu	Arg	Pro	Leu	Asn	Glu
	145				150					155					160
Leu	Leu	Pro	Leu	Ala	Tyr	Ile	Glu	Asp	Pro	Lys	Lys	Asn	Arg	Ile	Met
			165						170					175	
Gln	Trp	Arg	Asp	Ile	Lys	Thr	Glu	Asn	Gly	Leu	Lys	Gln	Met	Ser	Phe
			180					185					190		
Ser	Leu	Ala	Ala	Glu	Pro	Ile	Gln	Gly	Pro	Tyr	Lys	Ile	Val	Val	His
		195					200					205			
Lys	Glu	Ser	Gly	Glu	Lys	Glu	Glu	His	Ser	Phe	Thr	Val	Met	Glu	Phe
	210					215					220				
Val	Leu	Pro	Arg	Phe	Asn	Val	Asp	Leu	Lys	Val	Pro	Asn	Ala	Met	Ser
	225				230					235					240
Val	Asn	Asp	Glu	Val	Leu	Ser	Val	Thr	Ala	Cys	Gly	Lys	Tyr	Thr	Tyr
			245						250					255	
Gly	Lys	Pro	Val	Pro	Gly	His	Val	Lys	Ile	Asn	Val	Cys	Arg	Glu	Thr
			260					265					270		

Glu	Thr	Gly	Cys	Arg	Glu	Val	Asn	Ser	Gln	Leu	Asp	Asn	Asn	Gly	Cys		
		275					280					285					
Ser	Thr	Gln	Glu	Val	Asn	Ile	Thr	Glu	Leu	Gln	Ser	Lys	Lys	Arg	Asn		
	290					295					300						
Tyr	Glu	Val	Gln	Leu	Phe	His	Val	Asn	Ala	Thr	Val	Thr	Glu	Glu	Gly		
305					310					315					320		
Thr	Gly	Leu	Glu	Phe	Ser	Arg	Ser	Gly	Thr	Thr	Lys	Ile	Glu	Arg	Ile		
				325					330					335			
Thr	Asn	Lys	Leu	Ile	Phe	Leu	Lys	Ala	Asp	Ser	His	Phe	Arg	His	Gly		
			340					345					350				
Ile	Pro	Phe	Phe	Val	Lys	Val	Arg	Leu	Val	Asp	Ile	Lys	Gly	Asp	Pro		
		355					360					365					
Ile	Pro	Asn	Glu	Lys	Val	Phe	Ile	Lys	Ala	Gln	Glu	Leu	Ser	Tyr	Thr		
	370					375					380						
Ser	Ala	Thr	Thr	Thr	Asp	Gln	His	Gly	Leu	Ala	Glu	Phe	Ser	Ile	Asp		
385					390					395					400		
Thr	Thr	Cys	Ile	Ser	Gly	Ser	Ser	Leu	His	Ile	Lys	Val	Asn	His	Lys		
			405						410					415			
Glu	Glu	Asp	Ser	Cys	Ser	Tyr	Phe	Tyr	Cys	Met	Glu	Glu	Arg	His	Ala		
			420					425					430				
Ser	Ala	Lys	His	Val	Ala	Tyr	Ala	Val	Tyr	Ser	Leu	Ser	Lys	Ser	Tyr		
		435					440					445					
Ile	Tyr	Leu	Asp	Thr	Glu	Thr	Ser	Ser	Ile	Leu	Pro	Cys	Asn	Gln	Ile		
	450					455					460						
His	Thr	Val	Gln	Ala	His	Phe	Ile	Leu	Lys	Gly	Asp	Leu	Gly	Val	Leu		
465					470					475					480		
Lys	Glu	Leu	Ile	Phe	Tyr	Tyr	Leu	Val	Met	Ala	Gln	Gly	Ser	Ile	Ile		
			485						490					495			
Gln	Thr	Gly	Asn	His	Thr	His	Gln	Val	Glu	Pro	Gly	Glu	Ala	Pro	Val		
			500					505					510				
Lys	Gly	Lys	Phe	Ala	Leu	Glu	Ile	Pro	Val	Glu	Phe	Ser	Met	Val	Pro		
		515					520					525					
Met	Ala	Lys	Met	Leu	Ile	Tyr	Thr	Ile	Leu	Pro	Asp	Gly	Glu	Val	Ile		
	530					535					540						
Ala	Asp	Ser	Val	Asn	Phe	Glu	Ile	Glu	Lys	Cys	Leu	Arg	Asn	Lys	Val		
545					550					555					560		
Asp	Leu	Arg	Phe	Ser	Thr	Ser	Gln	Ser	Leu	Pro	Ala	Ser	Gln	Thr	Arg		
			565						570					575			

Leu Gln Val Thr Ala Ser Pro Gln Ser Leu Cys Gly Leu Arg Ala Val
 580 585 590
 Asp Gln Ser Val Leu Leu Leu Lys Pro Glu Ser Glu Leu Ser Pro Ser
 595 600 605
 Trp Ile Tyr Asn Leu Pro Gly Met Gln Gln Asn Lys Phe Val Pro Ser
 610 615 620
 Ser Arg Leu Ser Glu Asp Gln Glu Asp Cys Ile Leu Tyr Ser Ser Trp
 625 630 635 640
 Leu Ala Glu Lys His Thr Asn Leu Val Pro His Gly Thr Glu Lys Asp
 645 650 655
 Val Tyr Arg Tyr Val Glu Asp Met Gly Leu Thr Ala Phe Thr Asn Leu
 660 665 670
 Met Ile Lys Leu Pro Ile Ile Cys Phe Asp Tyr Gly Met Val Pro Ile
 675 680 685
 Ser Ala Pro Arg Val Glu Phe Asp Leu Ala Phe Thr Pro Glu Ile Ser
 690 695 700
 Trp Ser Leu Arg Thr Thr Leu Ser Lys Arg Pro Glu Glu Pro Pro Arg
 705 710 715 720
 Lys Asp Pro Ser Ser Asn Asp Pro Leu Thr Glu Thr Ile Arg Lys Tyr
 725 730 735
 Phe Pro Glu Thr Trp Val Trp Asp Ile Val Thr Val Asn Ser Thr Gly
 740 745 750
 Leu Ala Glu Val Glu Met Thr Val Pro Asp Thr Ile Thr Glu Trp Lys
 755 760 765
 Ala Gly Ala Leu Cys Leu Ser Asn Asp Thr Gly Leu Gly Leu Ser Ser
 770 775 780
 Val Val Pro Leu Gln Ala Phe Lys Pro Phe Phe Val Glu Val Ser Leu
 785 790 795 800
 Pro Tyr Ser Val Val Arg Gly Glu Ala Phe Met Leu Lys Ala Thr Val
 805 810 815
 Met Asn Tyr Leu Pro Thr Ser Met Gln Met Ser Val Gln Leu Glu Ala
 820 825 830
 Ser Pro Asp Phe Thr Ala Val Pro Val Gly Asp Asp Gln Asp Ser Tyr
 835 840 845
 Cys Leu Ser Ala Asn Gly Arg His Thr Ser Ser Trp Leu Val Thr Pro
 850 855 860
 Lys Ser Leu Gly Asn Val Asn Phe Ser Val Ser Ala Glu Ala Gln Gln
 865 870 875 880

Ser Ser Glu Pro Cys Gly Ser Glu Val Ala Thr Val Pro Ala Thr Gly
 885 890 895
 Arg Lys Asp Thr Val Val Lys Val Leu Ile Val Glu Pro Glu Gly Ile
 900 905 910
 Lys Gln Glu His Thr Phe Ser Ser Leu Phe Cys Ala Ser Asp Ala Glu
 915 920 925
 Ile Ser Glu Lys Met Ser Ser Gly Pro Pro Pro Thr Val Val Lys Asp
 930 935 940
 Ser Ala Arg Ala His Phe Ser Val Met Gly Asp Ile Leu Ser Ser Ala
 945 950 955 960
 Ile Arg Asn Thr Gln Asn Pro Leu His Met Pro Tyr Gly Cys Gly Glu
 965 970 975
 Gln Asn Met Val Leu Phe Ala Pro Asn Ile Tyr Val Leu Lys Tyr Leu
 980 985 990
 Asn Glu Thr Gln Gln Leu Thr Gln Lys Ile Lys Thr Lys Ala Leu Gly
 995 1000 1005
 Phe Leu Arg Ala Gly Tyr Gln Arg Glu Leu Asn Tyr Lys His Lys Asp
 1010 1015 1020
 Gly Ser Tyr Ser Ala Phe Gly Asp Gln Asn Gly Glu Arg Glu Gly Asn
 1025 1030 1035 1040
 Thr Trp Leu Thr Ala Phe Val Leu Lys Ser Phe Ala Gln Ala Arg Ala
 1045 1050 1055
 Phe Ile Phe Ile Asp Glu Ser His Ile Thr His Ala Phe Thr Trp Leu
 1060 1065 1070
 Ser Gln Lys Gln Lys Asp Asn Gly Cys Phe Arg Ser Ser Gly Ser Leu
 1075 1080 1085
 Phe Asn Asn Ala Met Lys Gly Gly Val Asp Asp Glu Met Thr Leu Ser
 1090 1095 1100
 Ala Tyr Ile Thr Met Ala Leu Leu Glu Ser Ser Leu Pro Ala Thr His
 1105 1110 1115 1120
 Pro Val Val Ser Lys Ala Leu Ser Cys Leu Glu Ser Ser Trp Lys Thr
 1125 1130 1135
 Ile Glu Gln Glu Arg Asn Ala Ser Phe Val Tyr Thr Lys Ala Leu Met
 1140 1145 1150
 Ala Tyr Ala Phe Ala Leu Ala Gly Asn Gln Asn Lys Arg Asp Glu Ile
 1155 1160 1165
 Leu Lys Ser Leu Asp Glu Glu Ala Ile Lys Glu Asn Asn Ser Ile His
 1170 1175 1180

Trp Lys Arg Pro Gln Lys Ser Arg Lys Ser Glu His His Leu Tyr Lys
 1185 1190 1195 1200
 Pro Gln Ala Ser Ser Ala Glu Val Glu Met Asn Ala Tyr Val Val Leu
 1205 1210 1215
 Ala Arg Leu Thr Ala Gln Pro Ala Pro Ser Pro Glu Asp Leu Thr Leu
 1220 1225 1230
 Ser Met Ser Thr Ile Met Trp Leu Thr Lys Gln Gln Asn Ser Asn Gly
 1235 1240 1245
 Gly Phe Ser Ser Thr Gln Asp Thr Val Val Ala Leu Asp Ala Leu Ser
 1250 1255 1260
 Lys Tyr Gly Ala Val Thr Phe Ser Arg Ser Gln Lys Thr Thr Leu Val
 1265 1270 1275 1280
 Thr Ile Gln Ser Thr Gly Ser Phe Ser Gln Lys Phe Gln Val Glu Asn
 1285 1290 1295
 Ser Asn Arg Leu Leu Leu Gln Gln Val Ala Leu Pro Asp Ile Pro Gly
 1300 1305 1310
 Asp Tyr Thr Ile Ser Val Ser Gly Glu Gly Cys Val Tyr Ala Gln Thr
 1315 1320 1325
 Met Leu Arg Tyr Asn Met His Leu Glu Lys Gln Leu Ser Ala Phe Ala
 1330 1335 1340
 Ile Trp Val Gln Thr Val Pro Leu Thr Cys Asn Asn Pro Lys Gly His
 1345 1350 1355 1360
 Asn Ser Phe Gln Ile Ser Leu Glu Ile Ser Tyr Thr Gly Ser Arg Pro
 1365 1370 1375
 Ala Ser Asn Met Val Ile Ala Asp Val Lys Met Leu Ser Gly Phe Ile
 1380 1385 1390
 Pro Leu Lys Pro Thr Val Lys Lys Leu Glu Arg Leu Glu His Val Ser
 1395 1400 1405
 Arg Thr Glu Val Ser Asn Asn Asn Val Leu Ile Tyr Leu Asp Gln Val
 1410 1415 1420
 Thr Asn Gln Thr Leu Ala Phe Ser Phe Ile Ile Gln Gln Asp Ile Pro
 1425 1430 1435 1440
 Val Arg Asn Leu Gln Pro Ala Ile Val Lys Val Tyr Asp Tyr Tyr Glu
 1445 1450 1455
 Thr Asp Glu Met Ala Phe Ala Glu Tyr Ser Ser Pro Cys Ser Thr Asp
 1460 1465 1470
 Lys Gln Asn Val
 1475

<210> 115
 <211> 751
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Alpha 2
 macroglobulin Consensus Sequence

<400> 115

Ile	Asp	Glu	Asp	Asp	Ile	Thr	Ile	Arg	Ser	Tyr	Phe	Pro	Glu	Ser	Trp	1	5	10	15
Leu	Trp	Glu	Val	Glu	Glu	Val	Asp	Arg	Ser	Pro	Val	Leu	Thr	Val	Asn	20	25	30	
Ile	Thr	Leu	Pro	Asp	Ser	Ile	Thr	Thr	Trp	Glu	Ile	Leu	Ala	Val	Ser	35	40	45	
Leu	Ser	Asn	Thr	Lys	Gly	Leu	Cys	Val	Ala	Asp	Pro	Val	Glu	Leu	Thr	50	55	60	
Val	Phe	Gln	Asp	Phe	Phe	Leu	Glu	Leu	Arg	Leu	Pro	Tyr	Ser	Val	Val	65	70	75	80
Arg	Gly	Glu	Gln	Val	Glu	Leu	Arg	Ala	Val	Leu	Tyr	Asn	Tyr	Leu	Pro	85	90	95	
Ser	Gln	Asp	Ile	Lys	Val	Val	Val	Gln	Leu	Glu	Val	Glu	Pro	Leu	Cys	100	105	110	
Gln	Ala	Gly	Phe	Cys	Ser	Leu	Ala	Thr	Gln	Arg	Thr	Arg	Ser	Ser	Gln	115	120	125	
Ser	Val	Arg	Pro	Lys	Ser	Leu	Ser	Ser	Val	Ser	Phe	Pro	Val	Val	Val	130	135	140	
Val	Pro	Leu	Ala	Ser	Gly	Leu	Ser	Leu	Val	Glu	Val	Val	Ala	Ser	Val	145	150	155	160
Pro	Glu	Phe	Phe	Val	Lys	Asp	Ala	Val	Val	Lys	Thr	Leu	Lys	Val	Glu	165	170	175	
Pro	Glu	Gly	Ala	Arg	Lys	Glu	Glu	Thr	Val	Ser	Ser	Leu	Leu	Leu	Pro	180	185	190	
Pro	Glu	His	Leu	Gly	Gly	Gly	Leu	Glu	Val	Ser	Glu	Val	Pro	Ala	Leu	195	200	205	
Lys	Leu	Pro	Asp	Asp	Val	Pro	Asp	Thr	Glu	Ala	Glu	Ala	Val	Ile	Ser	210	215	220	
Val	Gln	Gly	Asp	Pro	Val	Ala	Gln	Ala	Ile	Gln	Asn	Thr	Leu	Ser	Gly	225	230	235	240
Glu	Gly	Leu	Asn	Asn	Leu	Leu	Arg	Leu	Pro	Ser	Gly	Cys	Gly	Glu	Gln				

245										250					255				
Asn	Met	Ile	Tyr	Met	Ala	Pro	Thr	Val	Tyr	Val	Leu	His	Tyr	Leu	Asp				
			260					265					270						
Glu	Thr	Trp	Gln	Trp	Glu	Lys	Pro	Gly	Thr	Lys	Lys	Lys	Gln	Lys	Ala				
		275					280					285							
Ile	Asp	Leu	Ile	Asn	Lys	Gly	Tyr	Gln	Arg	Gln	Leu	Asn	Tyr	Arg	Lys				
	290					295					300								
Ala	Asp	Gly	Ser	Tyr	Ala	Ala	Phe	Leu	His	Arg	Ala	Ser	Ser	Thr	Trp				
305					310					315					320				
Leu	Thr	Ala	Phe	Val	Leu	Lys	Val	Phe	Ser	Gln	Ala	Arg	Asn	Tyr	Val				
				325					330					335					
Phe	Ile	Asp	Glu	Glu	His	Ile	Cys	Gly	Ala	Val	Lys	Trp	Leu	Ile	Leu				
			340					345					350						
Asn	Gln	Gln	Lys	Asp	Asp	Gly	Val	Phe	Arg	Glu	Ser	Gly	Pro	Val	Ile				
		355					360					365							
His	Asn	Glu	Met	Lys	Gly	Gly	Val	Gly	Asp	Asp	Ala	Glu	Val	Glu	Val				
	370					375					380								
Thr	Leu	Thr	Ala	Phe	Ile	Thr	Ile	Ala	Leu	Leu	Glu	Ala	Lys	Leu	Val				
385					390					395					400				
Cys	Ile	Ser	Pro	Val	Val	Ala	Asn	Ala	Leu	Ser	Ile	Leu	Lys	Ala	Ser				
				405					410					415					
Asp	Tyr	Leu	Leu	Glu	Asn	Tyr	Ala	Asn	Gly	Gln	Arg	Val	Tyr	Thr	Leu				
			420					425					430						
Ala	Leu	Thr	Ala	Tyr	Ala	Leu	Ala	Leu	Ala	Gly	Val	Leu	His	Lys	Leu				
		435					440					445							
Lys	Glu	Ile	Leu	Lys	Ser	Leu	Lys	Glu	Glu	Leu	Tyr	Lys	Ala	Leu	Val				
	450					455					460								
Lys	Gly	His	Trp	Glu	Arg	Pro	Gln	Lys	Pro	Lys	Asp	Ala	Pro	Gly	His				
465					470					475				480					
Pro	Tyr	Ser	Pro	Gln	Pro	Gln	Ala	Ala	Ala	Val	Glu	Met	Thr	Ser	Tyr				
				485					490					495					
Ala	Leu	Leu	Ala	Leu	Leu	Thr	Leu	Leu	Pro	Phe	Pro	Lys	Val	Glu	Met				
			500					505					510						
Ala	Pro	Lys	Val	Val	Lys	Trp	Leu	Thr	Glu	Gln	Gln	Tyr	Tyr	Gly	Gly				
		515					520					525							
Gly	Phe	Gly	Ser	Thr	Gln	Asp	Thr	Val	Met	Ala	Leu	Gln	Ala	Leu	Ser				
	530					535					540								
Lys	Tyr	Gly	Ile	Ala	Thr	Pro	Thr	His	Lys	Glu	Lys	Asn	Leu	Ser	Val				

545		550		555		560									
Thr	Ile	Gln	Ser	Pro	Ser	Gly	Ser	Phe	Lys	Ser	His	Phe	Gln	Ile	Leu
				565					570					575	
Asn	Asn	Asn	Ala	Phe	Leu	Leu	Arg	Pro	Val	Glu	Leu	Pro	Leu	Asn	Glu
			580					585					590		
Gly	Phe	Thr	Val	Thr	Ala	Lys	Val	Thr	Gly	Gln	Gly	Thr	Leu	Thr	Leu
		595					600					605			
Val	Thr	Thr	Tyr	Arg	Tyr	Lys	Val	Leu	Asp	Lys	Lys	Asn	Thr	Phe	Cys
	610					615					620				
Phe	Asp	Leu	Lys	Ile	Glu	Thr	Val	Pro	Asp	Thr	Cys	Val	Glu	Pro	Lys
625					630					635					640
Gly	Ala	Lys	Asn	Ser	Asp	Tyr	Leu	Ser	Ile	Cys	Thr	Arg	Tyr	Ala	Gly
			645						650					655	
Ser	Arg	Ser	Asp	Ser	Gly	Met	Ala	Ile	Ala	Asp	Ile	Ser	Met	Leu	Thr
			660					665					670		
Gly	Phe	Ile	Pro	Leu	Lys	Pro	Asp	Leu	Lys	Lys	Leu	Glu	Asn	Gly	Val
	675						680					685			
Asp	Arg	Tyr	Val	Ser	Lys	Tyr	Glu	Ile	Asp	Gly	Asn	His	Val	Leu	Leu
	690					695					700				
Tyr	Leu	Asp	Lys	Val	Ser	His	Ser	Glu	Thr	Glu	Cys	Val	Gly	Phe	Lys
705					710					715					720
Ile	His	Gln	Asp	Phe	Glu	Val	Gly	Leu	Leu	Gln	Pro	Ala	Ser	Val	Lys
			725					730						735	
Val	Tyr	Asp	Tyr	Tyr	Glu	Pro	Asp	Glu	Gln	Cys	Thr	Ala	Phe	Tyr	
		740						745					750		

<210> 116
 <211> 620
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Alpha 2
 macroglobulin Consensus Sequence

<400> 116
 Arg Leu Leu Trp Leu Leu Leu Leu Leu Leu Phe Phe Asp Ser Ser
 1 5 10 15
 Leu Gln Lys Pro Arg Tyr Met Val Ile Val Pro Ser Ile Leu Arg Thr
 20 25 30
 Glu Thr Pro Glu Lys Val Cys Val Gln Leu His Asp Leu Asn Glu Thr
 35 40 45

Val	Thr	Val	Thr	Val	Ser	Leu	His	Ser	Phe	Pro	Gly	Lys	Arg	Asn	Leu	50	55	60
Ser	Ser	Leu	Phe	Thr	Val	Leu	Leu	Ser	Ser	Lys	Asp	Leu	Phe	His	Cys	65	70	75
Val	Ser	Phe	Thr	Val	Pro	Gln	Pro	Gly	Leu	Phe	Lys	Ser	Ser	Lys	Gly	85	90	95
Glu	Glu	Ser	Phe	Val	Val	Val	Gln	Val	Lys	Gly	Pro	Thr	His	Thr	Phe	100	105	110
Lys	Glu	Lys	Val	Thr	Val	Leu	Val	Ser	Ser	Arg	Arg	Gly	Leu	Val	Phe	115	120	125
Ile	Gln	Thr	Asp	Lys	Pro	Ile	Tyr	Thr	Pro	Gly	Gln	Thr	Val	Arg	Tyr	130	135	140
Arg	Val	Phe	Ser	Val	Asp	Glu	Asn	Leu	Arg	Pro	Leu	Asn	Glu	Leu	Ile	145	150	155
Leu	Val	Tyr	Ile	Glu	Asp	Pro	Glu	Gly	Asn	Arg	Val	Asp	Gln	Trp	Glu	165	170	175
Val	Asn	Lys	Leu	Glu	Gly	Gly	Ile	Phe	Gln	Leu	Ser	Phe	Pro	Ile	Pro	180	185	190
Ser	Glu	Pro	Ile	Gln	Gly	Thr	Trp	Lys	Ile	Val	Ala	Arg	Tyr	Glu	Ser	195	200	205
Gly	Pro	Glu	Ser	Asn	Tyr	Thr	His	Tyr	Phe	Glu	Val	Lys	Glu	Tyr	Val	210	215	220
Leu	Pro	Ser	Phe	Glu	Val	Ser	Ile	Thr	Pro	Pro	Lys	Pro	Phe	Ile	Tyr	225	230	235
Tyr	Asp	Asn	Phe	Lys	Glu	Phe	Glu	Val	Thr	Ile	Cys	Ala	Arg	Tyr	Thr	245	250	255
Tyr	Gly	Lys	Pro	Val	Pro	Gly	Val	Ala	Tyr	Val	Arg	Phe	Gly	Val	Lys	260	265	270
Asp	Glu	Asp	Gly	Lys	Lys	Glu	Leu	Leu	Ala	Gly	Leu	Glu	Glu	Arg	Ala	275	280	285
Lys	Leu	Leu	Asp	Gly	Asn	Gly	Glu	Ile	Cys	Leu	Ser	Gln	Glu	Val	Leu	290	295	300
Leu	Lys	Glu	Leu	Gln	Leu	Lys	Asn	Glu	Asp	Leu	Glu	Gly	Lys	Ser	Leu	305	310	315
Tyr	Val	Ala	Val	Ala	Val	Ile	Glu	Ser	Glu	Gly	Gly	Asp	Met	Glu	Glu	325	330	335
Ala	Glu	Leu	Gly	Gly	Ile	Lys	Ile	Val	Arg	Ser	Pro	Tyr	Lys	Leu	Lys	340	345	350

Phe Val Lys Thr Pro Ser His Phe Lys Pro Gly Ile Pro Phe Phe Leu
355 360 365
Lys Val Leu Val Val Asp Pro Asp Gly Ser Pro Ala Pro Asn Val Pro
370 375 380
Val Lys Val Ser Ala Gln Asp Ala Ser Tyr Tyr Ser Asn Gly Thr Thr
385 390 395 400
Asp Glu Asp Gly Leu Ala Gln Phe Ser Ile Asn Thr Ser Gly Ile Ser
405 410 415
Ser Leu Ser Ile Thr Val Arg Thr Asn His Lys Glu Leu Pro Glu Glu
420 425 430
Val Gln Ala His Ala Glu Ala Gln Ala Thr Ala Tyr Ser Thr Val Ser
435 440 445
Leu Ser Lys Ser Tyr Ile His Leu Ser Ile Glu Arg Thr Leu Pro Cys
450 455 460
Gly Pro Gly Val Gly Glu Gln Ala Asn Phe Ile Leu Arg Gly Lys Ser
465 470 475 480
Leu Gly Glu Leu Lys Ile Leu His Phe Tyr Tyr Leu Ile Met Ser Lys
485 490 495
Gly Lys Ile Val Lys Thr Gly Arg Glu Pro Arg Glu Pro Gly Gln Gly
500 505 510
Leu Phe Ser Leu Ser Ile Pro Val Thr Pro Asp Leu Ala Pro Ser Phe
515 520 525
Arg Leu Val Ala Tyr Tyr Ile Leu Pro Gln Gly Glu Val Val Ala Asp
530 535 540
Ser Val Trp Ile Asp Val Glu Asp Cys Cys Ala Asn Lys Leu Asp Leu
545 550 555 560
Ser Phe Ser Pro Ser Lys Asp Tyr Arg Leu Pro Ala Gln Gln Val Lys
565 570 575
Leu Arg Val Glu Ala Asp Pro Gln Ser Leu Val Ala Leu Arg Ala Val
580 585 590
Asp Gln Ala Val Tyr Leu Leu Lys Pro Lys Ala Lys Leu Ser Met Ser
595 600 605
Lys Val Tyr Asp Leu Leu Glu Lys Ser Asp Leu Gly
610 615 620

<210> 117
<211> 931
<212> PRT
<213> Caenorhabditis elegans

<400> 117

Met Arg Lys Gly Leu Arg Ala Thr Ala Ala Arg Cys Gly Leu Gly Leu
1 5 10 15
Gly Tyr Leu Leu Gln Met Leu Val Leu Pro Ala Leu Ala Leu Leu Ser
20 25 30
Ala Ser Gly Thr Gly Ser Ala Ala Gln Asp Asp Glu Phe Phe His Glu
35 40 45
Leu Pro Glu Thr Phe Pro Ser Asp Pro Pro Glu Pro Leu Pro His Phe
50 55 60
Leu Ile Glu Pro Glu Glu Ala Tyr Ile Val Lys Asn Lys Pro Val Asn
65 70 75 80
Leu Tyr Cys Lys Ala Ser Pro Ala Thr Gln Ile Tyr Phe Lys Cys Asn
85 90 95
Ser Glu Trp Val His Gln Lys Asp His Val Val Asp Glu Arg Val Asp
100 105 110
Glu Thr Ser Gly Leu Ile Val Arg Glu Val Ser Ile Glu Ile Ser Arg
115 120 125
Gln Gln Val Glu Glu Leu Phe Gly Pro Glu Asp Tyr Trp Cys Gln Cys
130 135 140
Val Ala Trp Ser Ser Ala Gly Thr Thr Lys Ser Arg Lys Ala Tyr Val
145 150 155 160
Arg Ile Ala Tyr Leu Arg Lys Thr Phe Glu Gln Glu Pro Leu Gly Lys
165 170 175
Glu Val Ser Leu Glu Gln Glu Val Leu Leu Gln Cys Arg Pro Pro Glu
180 185 190
Gly Ile Pro Val Ala Glu Val Glu Trp Leu Lys Asn Glu Asp Ile Ile
195 200 205
Asp Pro Ala Glu Asp Arg Asn Phe Tyr Ile Thr Ile Asp His Asn Leu
210 215 220
Ile Ile Lys Gln Ala Arg Leu Ser Asp Thr Ala Asn Tyr Thr Cys Val
225 230 235 240
Ala Lys Asn Ile Val Ala Lys Arg Lys Ser Thr Thr Ala Thr Val Ile
245 250 255
Val Tyr Val Asn Gly Gly Trp Ser Thr Trp Thr Glu Trp Ser Val Cys
260 265 270
Asn Ser Arg Cys Gly Arg Gly Tyr Gln Lys Arg Thr Arg Thr Cys Thr
275 280 285
Asn Pro Ala Pro Leu Asn Gly Gly Ala Phe Cys Glu Gly Gln Ser Val

290	295	300
Gln Lys Ile Ala Cys Thr Thr Leu Cys Pro Val Asp Gly Arg Trp Thr		
305	310	315 320
Ser Trp Ser Lys Trp Ser Thr Cys Gly Thr Glu Cys Thr His Trp Arg		
	325	330 335
Arg Arg Glu Cys Thr Ala Pro Ala Pro Lys Asn Gly Gly Lys Asp Cys		
	340	345 350
Asp Gly Leu Val Leu Gln Ser Lys Asn Cys Thr Asp Gly Leu Cys Met		
	355	360 365
Gln Ala Ala Pro Asp Ser Asp Asp Val Ala Leu Tyr Val Gly Ile Val		
	370	375 380
Ile Ala Val Thr Val Cys Leu Ala Ile Thr Val Val Val Ala Leu Phe		
	385	390 395 400
Val Tyr Arg Lys Asn His Arg Asp Phe Glu Ser Asp Ile Ile Asp Ser		
	405	410 415
Ser Ala Leu Asn Gly Gly Phe Gln Pro Val Asn Ile Lys Ala Ala Arg		
	420	425 430
Gln Asp Leu Leu Ala Val Pro Pro Asp Leu Thr Ser Ala Ala Ala Met		
	435	440 445
Tyr Arg Gly Pro Val Tyr Ala Leu His Asp Val Ser Asp Lys Ile Pro		
	450	455 460
Met Thr Asn Ser Pro Ile Leu Asp Pro Leu Pro Asn Leu Lys Ile Lys		
	465	470 475 480
Val Tyr Asn Ser Ser Gly Ala Val Thr Pro Gln Asp Asp Leu Ala Glu		
	485	490 495
Phe Ser Ser Lys Leu Ser Pro Gln Met Thr Gln Ser Leu Leu Glu Asn		
	500	505 510
Glu Ala Leu Asn Leu Lys Asn Gln Ser Leu Ala Arg Gln Thr Asp Pro		
	515	520 525
Ser Cys Thr Ala Phe Gly Thr Phe Asn Ser Leu Gly Gly His Leu Ile		
	530	535 540
Ile Pro Asn Ser Gly Val Ser Leu Leu Ile Pro Ala Gly Ala Ile Pro		
	545	550 555 560
Gln Gly Arg Val Tyr Glu Met Tyr Val Thr Val His Arg Lys Glu Asn		
	565	570 575
Met Arg Pro Pro Met Glu Asp Ser Gln Thr Leu Leu Thr Pro Val Val		
	580	585 590
Ser Cys Gly Pro Pro Gly Ala Leu Leu Thr Arg Pro Val Ile Leu Thr		

595					600					605					
Leu	His	His	Cys	Ala	Asp	Pro	Ser	Thr	Glu	Asp	Trp	Lys	Ile	Gln	Leu
610						615					620				
Lys	Asn	Gln	Ala	Val	Gln	Gly	Gln	Trp	Glu	Asp	Val	Val	Val	Val	Gly
625					630					635					640
Glu	Glu	Asn	Phe	Thr	Thr	Pro	Cys	Tyr	Ile	Gln	Leu	Asp	Ala	Glu	Ala
				645					650					655	
Cys	His	Ile	Leu	Thr	Glu	Asn	Leu	Ser	Thr	Tyr	Ala	Leu	Val	Gly	Gln
			660					665					670		
Ser	Thr	Thr	Lys	Ala	Ala	Ala	Lys	Arg	Leu	Lys	Leu	Ala	Ile	Phe	Gly
		675					680					685			
Pro	Leu	Cys	Cys	Ser	Ser	Leu	Glu	Tyr	Ser	Ile	Arg	Val	Tyr	Cys	Leu
690						695					700				
Asp	Asp	Thr	Gln	Asp	Ala	Leu	Lys	Glu	Val	Leu	Gln	Leu	Glu	Arg	Gln
705					710					715					720
Met	Gly	Gly	Gln	Leu	Leu	Glu	Glu	Pro	Lys	Ala	Leu	His	Phe	Lys	Gly
			725						730					735	
Ser	Ile	His	Asn	Leu	Arg	Leu	Ser	Ile	His	Asp	Ile	Ala	His	Ser	Leu
			740					745					750		
Trp	Lys	Ser	Lys	Leu	Leu	Ala	Lys	Tyr	Gln	Glu	Ile	Pro	Phe	Tyr	His
		755					760					765			
Ile	Trp	Ser	Gly	Ser	Gln	Arg	Asn	Leu	His	Cys	Thr	Phe	Thr	Leu	Glu
770					775						780				
Arg	Leu	Ser	Leu	Asn	Thr	Val	Glu	Leu	Val	Cys	Lys	Leu	Cys	Val	Arg
785					790					795					800
Gln	Val	Glu	Gly	Glu	Gly	Gln	Ile	Phe	Gln	Leu	Asn	Cys	Thr	Val	Ser
			805						810					815	
Glu	Glu	Pro	Thr	Gly	Ile	Asp	Leu	Pro	Leu	Leu	Asp	Pro	Ala	Ser	Thr
			820					825					830		
Ile	Thr	Thr	Val	Thr	Gly	Pro	Ser	Ala	Phe	Ser	Ile	Pro	Leu	Pro	Ile
		835					840					845			
Arg	Gln	Lys	Leu	Cys	Ser	Ser	Leu	Asp	Ala	Pro	Gln	Thr	Arg	Gly	His
		850				855					860				
Asp	Trp	Arg	Met	Leu	Ala	His	Lys	Leu	Asn	Leu	Asp	Arg	Tyr	Leu	Asn
865					870					875					880
Tyr	Phe	Ala	Thr	Lys	Ser	Ser	Pro	Thr	Gly	Val	Ile	Leu	Asp	Leu	Trp
			885						890					895	
Glu	Ala	Gln	Asn	Phe	Pro	Asp	Gly	Asn	Leu	Ser	Met	Leu	Ala	Ala	Val

900	905	910
Leu Glu Glu Met Gly Arg His Glu Thr Val Val Ser Leu Ala Ala Glu		
915	920	925
Gly Gln Tyr		
930		
<210> 118		
<211> 931		
<212> PRT		
<213> Homo sapiens		
<400> 118		
Met Arg Lys Gly Leu Arg Ala Thr Ala Ala Arg Cys Gly Leu Gly Leu		
1	5	15
Gly Tyr Leu Leu Gln Met Leu Val Leu Pro Ala Leu Ala Leu Leu Ser		
20	25	30
Ala Ser Gly Thr Gly Ser Ala Ala Gln Asp Asp Asp Phe Phe His Glu		
35	40	45
Leu Pro Glu Thr Phe Pro Ser Asp Pro Pro Glu Pro Leu Pro His Phe		
50	55	60
Leu Ile Glu Pro Glu Glu Ala Tyr Ile Val Lys Asn Lys Pro Val Asn		
65	70	75
Leu Tyr Cys Lys Ala Ser Pro Ala Thr Gln Ile Tyr Phe Lys Cys Asn		
85	90	95
Ser Glu Trp Val His Gln Lys Asp His Ile Val Asp Glu Arg Val Asp		
100	105	110
Glu Thr Ser Gly Leu Ile Val Arg Glu Val Ser Ile Glu Ile Ser Arg		
115	120	125
Gln Gln Val Glu Glu Leu Phe Gly Pro Glu Asp Tyr Trp Cys Gln Cys		
130	135	140
Val Ala Trp Ser Ser Ala Gly Thr Thr Lys Ser Arg Lys Ala Tyr Val		
145	150	155
Arg Ile Ala Tyr Leu Arg Lys Thr Phe Glu Gln Glu Pro Leu Gly Lys		
165	170	175
Glu Val Ser Leu Glu Gln Glu Val Leu Leu Gln Cys Arg Pro Pro Glu		
180	185	190
Gly Ile Pro Val Ala Glu Val Glu Trp Leu Lys Asn Glu Asp Ile Ile		
195	200	205
Asp Pro Val Glu Asp Arg Asn Phe Tyr Ile Thr Ile Asp His Asn Leu		
210	215	220

Ile Ile Lys Gln Ala Arg Leu Ser Asp Thr Ala Asn Tyr Thr Cys Val
 225 230 235 240
 Ala Lys Asn Ile Val Ala Lys Arg Lys Ser Thr Thr Ala Thr Val Ile
 245 250 255
 Val Tyr Val Asn Gly Gly Trp Ser Thr Trp Thr Glu Trp Ser Val Cys
 260 265 270
 Asn Ser Arg Cys Gly Arg Gly Tyr Gln Lys Arg Thr Arg Thr Cys Thr
 275 280 285
 Asn Pro Ala Pro Leu Asn Gly Gly Ala Phe Cys Glu Gly Gln Ser Val
 290 295 300
 Gln Lys Ile Ala Cys Thr Thr Leu Cys Pro Val Asp Gly Arg Trp Thr
 305 310 315 320
 Pro Trp Ser Lys Trp Ser Thr Cys Gly Thr Glu Cys Thr His Trp Arg
 325 330 335
 Arg Arg Glu Cys Thr Ala Pro Ala Pro Lys Asn Gly Gly Lys Asp Cys
 340 345 350
 Asp Gly Leu Val Leu Gln Ser Lys Asn Cys Thr Asp Gly Leu Cys Met
 355 360 365
 Gln Thr Ala Pro Asp Ser Asp Asp Val Ala Leu Tyr Val Gly Ile Val
 370 375 380
 Ile Ala Val Ile Val Cys Leu Ala Ile Ser Val Val Val Ala Leu Phe
 385 390 395 400
 Val Tyr Arg Lys Asn His Arg Asp Phe Glu Ser Asp Ile Ile Asp Ser
 405 410 415
 Ser Ala Leu Asn Gly Gly Phe Gln Pro Val Asn Ile Lys Ala Ala Arg
 420 425 430
 Gln Asp Leu Leu Ala Val Pro Pro Asp Leu Thr Ser Ala Ala Ala Met
 435 440 445
 Tyr Arg Gly Pro Val Tyr Ala Leu His Asp Val Ser Asp Lys Ile Pro
 450 455 460
 Met Thr Asn Ser Pro Ile Leu Asp Pro Leu Pro Asn Leu Lys Ile Lys
 465 470 475 480
 Val Tyr Asn Thr Ser Gly Ala Val Ser Pro Gln Asp Asp Leu Ser Glu
 485 490 495
 Phe Thr Ser Lys Leu Ser Pro Gln Met Thr Gln Ser Leu Leu Glu Asn
 500 505 510
 Glu Ala Leu Ser Leu Lys Asn Gln Ser Leu Ala Arg Gln Thr Asp Pro
 515 520 525

Ser	Cys	Thr	Ala	Phe	Gly	Ser	Phe	Asn	Ser	Leu	Gly	Gly	His	Leu	Ile	530	535	540
Val	Pro	Asn	Ser	Gly	Val	Ser	Leu	Leu	Ile	Pro	Ala	Gly	Ala	Ile	Pro	545	550	555
Gln	Gly	Arg	Val	Tyr	Glu	Met	Tyr	Val	Thr	Val	His	Arg	Lys	Glu	Thr	565	570	575
Met	Arg	Pro	Pro	Met	Asp	Asp	Ser	Gln	Thr	Leu	Leu	Thr	Pro	Val	Val	580	585	590
Ser	Cys	Gly	Pro	Pro	Gly	Ala	Leu	Leu	Thr	Arg	Pro	Val	Val	Leu	Thr	595	600	605
Met	His	His	Cys	Ala	Asp	Pro	Asn	Thr	Glu	Asp	Trp	Lys	Ile	Leu	Leu	610	615	620
Lys	Asn	Gln	Ala	Ala	Gln	Gly	Gln	Trp	Glu	Asp	Val	Val	Val	Val	Gly	625	630	635
Glu	Glu	Asn	Phe	Thr	Thr	Pro	Cys	Tyr	Ile	Lys	Leu	Asp	Ala	Glu	Ala	645	650	655
Cys	His	Ile	Leu	Thr	Glu	Asn	Leu	Ser	Thr	Tyr	Ala	Leu	Val	Gly	His	660	665	670
Ser	Thr	Thr	Lys	Ala	Ala	Ala	Lys	Arg	Leu	Lys	Leu	Ala	Ile	Phe	Gly	675	680	685
Pro	Leu	Cys	Cys	Ser	Ser	Leu	Glu	Tyr	Ser	Ile	Arg	Val	Tyr	Cys	Leu	690	695	700
Asp	Asp	Thr	Gln	Asp	Ala	Leu	Lys	Glu	Ile	Leu	His	Leu	Glu	Arg	Gln	705	710	715
Thr	Gly	Gly	Gln	Leu	Leu	Glu	Glu	Pro	Lys	Ala	Leu	His	Phe	Lys	Gly	725	730	735
Ser	Thr	His	Asn	Leu	Arg	Leu	Ser	Ile	His	Asp	Ile	Ala	His	Ser	Leu	740	745	750
Trp	Lys	Ser	Lys	Leu	Leu	Ala	Lys	Tyr	Gln	Glu	Ile	Pro	Phe	Tyr	His	755	760	765
Val	Trp	Ser	Gly	Ser	Gln	Arg	Asn	Leu	His	Cys	Thr	Phe	Thr	Leu	Glu	770	775	780
Arg	Phe	Ser	Leu	Asn	Thr	Val	Glu	Leu	Val	Cys	Lys	Leu	Cys	Val	Arg	785	790	795
Gln	Val	Glu	Gly	Glu	Gly	Gln	Ile	Phe	Gln	Leu	Asn	Cys	Thr	Val	Ser	805	810	815
Glu	Glu	Pro	Thr	Gly	Ile	Asp	Leu	Pro	Leu	Leu	Asp	Pro	Ala	Asn	Thr	820	825	830

Ile Thr Thr Val Thr Gly Pro Ser Ala Phe Ser Ile Pro Leu Pro Ile
 835 840 845
 Arg Gln Lys Leu Cys Ser Ser Leu Asp Ala Pro Gln Thr Arg Gly His
 850 855 860
 Asp Trp Arg Met Leu Ala His Lys Leu Asn Leu Asp Arg Tyr Leu Asn
 865 870 875 880
 Tyr Phe Ala Thr Lys Ser Ser Pro Thr Gly Val Ile Leu Asp Leu Trp
 885 890 895
 Glu Ala Gln Asn Phe Pro Asp Gly Asn Leu Ser Met Leu Ala Ala Val
 900 905 910
 Leu Glu Glu Met Gly Arg His Glu Thr Val Val Ser Leu Ala Ala Glu
 915 920 925
 Gly Gln Tyr
 930

<210> 119
 <211> 931
 <212> PRT
 <213> *Caenorhabditis elegans*

<400> 119
 Met Arg Lys Gly Leu Arg Ala Thr Ala Ala Arg Cys Gly Leu Gly Leu
 1 5 10 15
 Gly Tyr Leu Leu Gln Met Leu Val Leu Pro Ala Leu Ala Leu Leu Ser
 20 25 30
 Ala Ser Gly Thr Gly Ser Ala Ala Gln Asp Asp Asp Phe Phe His Glu
 35 40 45
 Leu Pro Glu Thr Phe Pro Ser Asp Pro Pro Glu Pro Leu Pro His Phe
 50 55 60
 Leu Ile Glu Pro Glu Glu Ala Tyr Ile Val Lys Asn Lys Pro Val Asn
 65 70 75 80
 Leu Tyr Cys Lys Ala Ser Pro Ala Thr Gln Ile Tyr Phe Lys Cys Asn
 85 90 95
 Ser Glu Trp Val His Gln Lys Asp His Ile Val Asp Glu Arg Val Asp
 100 105 110
 Glu Thr Ser Gly Leu Ile Val Arg Glu Val Ser Ile Glu Ile Ser Arg
 115 120 125
 Gln Gln Val Glu Glu Leu Phe Gly Pro Glu Asp Tyr Trp Cys Gln Cys
 130 135 140
 Val Ala Trp Ser Ser Ala Gly Thr Thr Lys Ser Arg Lys Ala Tyr Val
 145 150 155 160

Arg	Ile	Ala	Tyr	Leu	Arg	Lys	Thr	Phe	Glu	Gln	Glu	Pro	Leu	Gly	Lys		
				165					170					175			
Glu	Val	Ser	Leu	Glu	Gln	Glu	Val	Leu	Leu	Gln	Cys	Arg	Pro	Pro	Glu		
			180					185					190				
Gly	Ile	Pro	Val	Ala	Glu	Val	Glu	Trp	Leu	Lys	Asn	Glu	Asp	Ile	Ile		
		195					200					205					
Asp	Pro	Val	Glu	Asp	Arg	Asn	Phe	Tyr	Ile	Thr	Ile	Asp	His	Asn	Leu		
	210					215					220						
Ile	Ile	Lys	Gln	Ala	Arg	Leu	Ser	Asp	Thr	Ala	Asn	Tyr	Thr	Cys	Val		
225					230					235					240		
Ala	Lys	Asn	Ile	Val	Ala	Lys	Arg	Lys	Ser	Thr	Thr	Ala	Thr	Val	Ile		
			245						250					255			
Val	Tyr	Val	Asn	Gly	Gly	Trp	Ser	Thr	Trp	Thr	Glu	Trp	Ser	Val	Cys		
			260					265					270				
Asn	Ser	Arg	Cys	Gly	Arg	Gly	Tyr	Gln	Lys	Arg	Thr	Arg	Thr	Cys	Thr		
	275						280					285					
Asn	Pro	Ala	Pro	Leu	Asn	Gly	Gly	Ala	Phe	Cys	Glu	Gly	Gln	Ser	Val		
	290					295					300						
Gln	Lys	Ile	Ala	Cys	Thr	Thr	Leu	Cys	Pro	Val	Asp	Gly	Arg	Trp	Thr		
305					310					315					320		
Pro	Trp	Ser	Lys	Trp	Ser	Thr	Cys	Gly	Thr	Glu	Cys	Thr	His	Trp	Arg		
			325						330					335			
Arg	Arg	Glu	Cys	Thr	Ala	Pro	Ala	Pro	Lys	Asn	Gly	Gly	Lys	Asp	Cys		
			340					345					350				
Asp	Gly	Leu	Val	Leu	Gln	Ser	Lys	Asn	Cys	Thr	Asp	Gly	Leu	Cys	Met		
	355						360				365						
Gln	Thr	Ala	Pro	Asp	Ser	Asp	Asp	Val	Ala	Leu	Tyr	Val	Gly	Ile	Val		
	370					375					380						
Ile	Ala	Val	Ile	Val	Cys	Leu	Ala	Ile	Ser	Val	Val	Val	Ala	Leu	Phe		
385					390					395					400		
Val	Tyr	Arg	Lys	Asn	His	Arg	Asp	Phe	Glu	Ser	Asp	Ile	Ile	Asp	Ser		
			405						410					415			
Ser	Ala	Leu	Asn	Gly	Gly	Phe	Gln	Pro	Val	Asn	Ile	Lys	Ala	Ala	Arg		
			420					425					430				
Gln	Asp	Leu	Leu	Ala	Val	Pro	Pro	Asp	Leu	Thr	Ser	Ala	Ala	Ala	Met		
	435						440					445					
Tyr	Arg	Gly	Pro	Val	Tyr	Ala	Leu	His	Asp	Val	Ser	Asp	Lys	Ile	Pro		
	450					455					460						

Met	Thr	Asn	Ser	Pro	Ile	Leu	Asp	Pro	Leu	Pro	Asn	Leu	Lys	Ile	Lys	
465					470					475					480	
Val	Tyr	Asn	Thr	Ser	Gly	Ala	Val	Thr	Pro	Gln	Asp	Asp	Leu	Ser	Glu	
				485					490					495		
Phe	Thr	Ser	Lys	Leu	Ser	Pro	Gln	Met	Thr	Gln	Ser	Leu	Leu	Glu	Asn	
			500					505					510			
Glu	Ala	Leu	Ser	Leu	Lys	Asn	Gln	Ser	Leu	Ala	Arg	Gln	Thr	Asp	Pro	
		515					520					525				
Ser	Cys	Thr	Ala	Phe	Gly	Ser	Phe	Asn	Ser	Leu	Gly	Gly	His	Leu	Ile	
	530					535					540					
Val	Pro	Asn	Ser	Gly	Val	Ser	Leu	Leu	Ile	Pro	Ala	Gly	Ala	Ile	Pro	
545				550						555					560	
Gln	Gly	Arg	Val	Tyr	Glu	Met	Tyr	Val	Thr	Val	His	Arg	Lys	Glu	Thr	
			565						570					575		
Met	Arg	Pro	Pro	Met	Asp	Asp	Ser	Gln	Thr	Leu	Leu	Thr	Pro	Val	Val	
			580					585					590			
Ser	Cys	Gly	Pro	Pro	Gly	Ala	Leu	Leu	Thr	Arg	Pro	Val	Val	Leu	Thr	
		595					600					605				
Met	His	His	Cys	Ala	Asp	Pro	Asn	Thr	Glu	Asp	Trp	Lys	Ile	Leu	Leu	
	610					615					620					
Lys	Asn	Gln	Ala	Ala	Gln	Gly	Gln	Trp	Glu	Asp	Val	Val	Val	Val	Gly	
625					630					635					640	
Glu	Glu	Asn	Phe	Thr	Thr	Pro	Cys	Tyr	Ile	Lys	Leu	Asp	Ala	Glu	Ala	
			645						650					655		
Cys	His	Ile	Leu	Thr	Glu	Asn	Leu	Ser	Thr	Tyr	Ala	Leu	Val	Gly	His	
			660					665					670			
Ser	Thr	Thr	Lys	Ala	Ala	Ala	Lys	Arg	Leu	Lys	Leu	Ala	Ile	Phe	Gly	
		675					680					685				
Pro	Leu	Cys	Cys	Ser	Ser	Leu	Glu	Tyr	Ser	Ile	Arg	Val	Tyr	Cys	Leu	
	690					695					700					
Asp	Asp	Thr	Gln	Asp	Ala	Leu	Lys	Glu	Ile	Leu	His	Leu	Glu	Arg	Gln	
705					710					715					720	
Thr	Gly	Gly	Gln	Leu	Leu	Glu	Glu	Pro	Lys	Ala	Leu	His	Phe	Lys	Gly	
			725						730					735		
Ser	Thr	His	Asn	Leu	Arg	Leu	Ser	Ile	His	Asp	Ile	Ala	His	Ser	Leu	
			740					745					750			
Trp	Lys	Ser	Lys	Leu	Leu	Ala	Lys	Tyr	Gln	Glu	Ile	Pro	Phe	Tyr	His	
		755					760					765				

Val Trp Ser Gly Ser Gln Arg Asn Leu His Cys Thr Phe Thr Leu Glu
 770 775 780
 Arg Phe Ser Leu Asn Thr Val Glu Leu Val Cys Lys Leu Cys Val Arg
 785 790 795 800
 Gln Val Glu Gly Glu Gly Gln Ile Phe Gln Leu Asn Cys Thr Val Ser
 805 810 815
 Glu Glu Pro Thr Gly Ile Asp Leu Pro Leu Leu Asp Pro Ala Asn Thr
 820 825 830
 Ile Thr Thr Val Thr Gly Pro Ser Ala Phe Ser Ile Pro Leu Pro Ile
 835 840 845
 Arg Gln Lys Leu Cys Ser Ser Leu Asp Ala Pro Gln Thr Arg Gly His
 850 855 860
 Asp Trp Arg Met Leu Ala His Lys Leu Asn Leu Asp Arg Tyr Leu Asn
 865 870 875 880
 Tyr Phe Ala Thr Lys Ser Ser Pro Thr Gly Val Ile Leu Asp Leu Trp
 885 890 895
 Glu Ala Gln Asn Phe Pro Asp Gly Asn Leu Ser Met Leu Ala Ala Val
 900 905 910
 Leu Glu Glu Met Gly Arg His Glu Thr Val Val Ser Leu Ala Ala Glu
 915 920 925
 Gly Gln Tyr
 930

<210> 120
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 <212> PRT
 <213> *Caenorhabditis elegans*

<400> 120
 Met Arg Lys Gly Leu Arg Ala Thr Ala Ala Arg Cys Gly Leu Gly Leu
 1 5 10 15
 Gly Tyr Leu Leu Gln Met Leu Val Leu Pro Ala Leu Ala Leu Leu Ser
 20 25 30
 Ala Ser Gly Thr Gly Ser Ala Ala Gln Asp Asp Asp Phe Phe His Glu
 35 40 45
 Leu Pro Glu Thr Phe Pro Ser Asp Pro Pro Glu Pro Leu Pro His Phe
 50 55 60
 Leu Ile Glu Pro Glu Glu Ala Tyr Ile Val Lys Asn Lys Pro Val Asn
 65 70 75 80
 Leu Tyr Cys Lys Ala Ser Pro Ala Thr Gln Ile Tyr Phe Lys Cys Asn

85					90					95					
Ser	Glu	Trp	Val	His	Gln	Lys	Asp	His	Ile	Val	Asp	Glu	Arg	Val	Asp
			100					105					110		
Glu	Thr	Ser	Gly	Leu	Ile	Val	Arg	Glu	Val	Ser	Ile	Glu	Ile	Ser	Arg
		115					120					125			
Gln	Gln	Val	Glu	Glu	Leu	Phe	Gly	Pro	Glu	Asp	Tyr	Trp	Cys	Gln	Cys
		130				135					140				
Val	Ala	Trp	Ser	Ser	Ala	Gly	Thr	Thr	Lys	Ser	Arg	Lys	Ala	Tyr	Val
145					150					155					160
Arg	Ile	Ala	Tyr	Leu	Arg	Lys	Thr	Phe	Glu	Gln	Glu	Pro	Leu	Gly	Lys
				165					170					175	
Glu	Val	Ser	Leu	Glu	Gln	Glu	Val	Leu	Leu	Gln	Cys	Arg	Pro	Pro	Glu
			180					185					190		
Gly	Ile	Pro	Val	Ala	Glu	Val	Glu	Trp	Leu	Lys	Asn	Glu	Asp	Ile	Ile
		195					200					205			
Asp	Pro	Val	Glu	Asp	Arg	Asn	Phe	Tyr	Ile	Thr	Ile	Asp	His	Asn	Leu
		210				215					220				
Ile	Ile	Lys	Gln	Ala	Arg	Leu	Ser	Asp	Thr	Ala	Asn	Tyr	Thr	Cys	Val
225				230						235					240
Ala	Lys	Asn	Ile	Val	Ala	Lys	Arg	Lys	Ser	Thr	Thr	Ala	Thr	Val	Ile
				245					250					255	
Val	Tyr	Val	Asn	Gly	Gly	Trp	Ser	Thr	Trp	Thr	Glu	Trp	Ser	Val	Cys
			260				265						270		
Asn	Ser	Arg	Cys	Gly	Arg	Gly	Tyr	Gln	Lys	Arg	Thr	Arg	Thr	Cys	Thr
		275					280					285			
Asn	Pro	Ala	Pro	Leu	Asn	Gly	Gly	Ala	Phe	Cys	Glu	Gly	Gln	Ser	Val
		290				295					300				
Gln	Lys	Ile	Ala	Cys	Thr	Thr	Leu	Cys	Pro	Val	Asp	Gly	Arg	Trp	Thr
305				310						315					320
Pro	Trp	Ser	Lys	Trp	Ser	Thr	Cys	Gly	Thr	Glu	Cys	Thr	His	Trp	Arg
				325					330					335	
Arg	Arg	Glu	Cys	Thr	Ala	Pro	Ala	Pro	Lys	Asn	Gly	Gly	Lys	Asp	Cys
			340					345					350		
Asp	Gly	Leu	Val	Leu	Gln	Ser	Lys	Asn	Cys	Thr	Asp	Gly	Leu	Cys	Met
		355					360					365			
Gln	Thr	Ala	Pro	Asp	Ser	Asp	Asp	Val	Ala	Leu	Tyr	Val	Gly	Ile	Val
		370				375					380				
Ile	Ala	Val	Ile	Val	Cys	Leu	Ala	Ile	Ser	Val	Val	Val	Ala	Leu	Phe

385		390		395		400
Val Tyr Arg Lys Asn His Arg Asp Phe Glu Ser Asp Ile Ile Asp Ser						
		405		410		415
Ser Ala Leu Asn Gly Gly Phe Gln Pro Val Asn Ile Lys Ala Ala Arg						
		420		425		430
Gln Asp Leu Leu Ala Val Pro Pro Asp Leu Thr Ser Ala Ala Ala Met						
		435		440		445
Tyr Arg Gly Pro Val Tyr Ala Leu His Asp Val Ser Asp Lys Ile Pro						
		450		455		460
Met Thr Asn Ser Pro Ile Leu Asp Pro Leu Pro Asn Leu Lys Ile Lys						
		465		470		475
Val Tyr Asn Thr Ser Gly Ala Val Thr Pro Gln Asp Asp Leu Ser Glu						
		485		490		495
Phe Thr Ser Lys Leu Ser Pro Gln Met Thr Gln Ser Leu Leu Glu Asn						
		500		505		510
Glu Ala Leu Ser Leu Lys Asn Gln Ser Leu Ala Arg Gln Thr Asp Pro						
		515		520		525
Ser Cys Thr Ala Phe Gly Ser Phe Asn Ser Leu Gly Gly His Leu Ile						
		530		535		540
Val Pro Asn Ser Gly Val Ser Leu Leu Ile Pro Ala Gly Ala Ile Pro						
		545		550		555
Gln Gly Arg Val Tyr Glu Met Tyr Val Thr Val His Arg Lys Glu Thr						
		565		570		575
Met Arg Pro Pro Met Asp Asp Ser Gln Thr Leu Leu Thr Pro Val Val						
		580		585		590
Ser Cys Gly Pro Pro Gly Ala Leu Leu Thr Arg Pro Val Val Leu Thr						
		595		600		605
Met His His Cys Ala Asp Pro Asn Thr Glu Asp Trp Lys Ile Leu Leu						
		610		615		620
Lys Asn Gln Ala Ala Gln Gly Gln Trp Glu Asp Val Val Val Val Gly						
		625		630		635
Glu Glu Asn Phe Thr Thr Pro Cys Tyr Ile Gln Leu Asp Ala Glu Ala						
		645		650		655
Cys His Ile Leu Thr Glu Asn Leu Ser Thr Tyr Ala Leu Val Gly His						
		660		665		670
Ser Thr Thr Lys Ala Ala Ala Lys Arg Leu Lys Leu Ala Ile Phe Gly						
		675		680		685
Pro Leu Cys Cys Ser Ser Leu Glu Tyr Ser Ile Arg Val Tyr Cys Leu						

690	695	700
Asp Asp Thr Gln Asp Ala Leu Lys Glu Ile Leu His Leu Glu Arg Gln 705 710 715 720		
Thr Gly Gly Gln Leu Leu Glu Glu Pro Lys Ala Leu His Phe Lys Gly 725 730 735		
Ser Thr His Asn Leu Arg Leu Ser Ile His Asp Ile Ala His Ser Leu 740 745 750		
Trp Lys Ser Lys Leu Leu Ala Lys Tyr Gln Glu Ile Pro Phe Tyr His 755 760 765		
Val Trp Ser Gly Ser Gln Arg Asn Leu His Cys Thr Phe Thr Leu Glu 770 775 780		
Arg Phe Ser Leu Asn Thr Val Glu Leu Val Cys Lys Leu Cys Val Arg 785 790 795 800		
Gln Val Glu Gly Glu Gly Gln Ile Phe Gln Leu Asn Cys Thr Val Ser 805 810 815		
Glu Glu Pro Thr Gly Ile Asp Leu Pro Leu Leu Asp Pro Ala Asn Thr 820 825 830		
Ile Thr Thr Val Thr Gly Pro Ser Ala Phe Ser Ile Pro Leu Pro Ile 835 840 845		
Arg Gln Lys Leu Cys Ser Ser Leu Asp Ala Pro Gln Thr Arg Gly His 850 855 860		
Asp Trp Arg Met Leu Ala His Lys Leu Asn Leu Asp Arg Tyr Leu Asn 865 870 875 880		
Tyr Phe Ala Thr Lys Ser Ser Pro Thr Gly Val Ile Leu Asp Leu Trp 885 890 895		
Glu Ala Gln Asn Phe Pro Asp Gly Asn Leu Ser Met Leu Ala Ala Val 900 905 910		
Leu Glu Glu Met Gly Arg His Glu Thr Val Val Ser Leu Ala Ala Glu 915 920 925		
Gly Gln Tyr 930		

<210> 121
 <211> 945
 <212> PRT
 <213> Rattus norvegicus

<400> 121
 Met Arg Ala Arg Ser Gly Ala Arg Gly Ala Leu Leu Leu Ala Leu Leu
 1 5 10 15

Leu Cys Trp Asp Pro Thr Pro Ser Leu Ala Gly Ile Asp Ser Gly Gly
 20 25 30
 Gln Ala Leu Pro Asp Ser Phe Pro Ser Ala Pro Ala Glu Gln Leu Pro
 35 40 45
 His Phe Leu Leu Glu Pro Glu Asp Ala Tyr Ile Val Lys Asn Lys Pro
 50 55 60
 Val Glu Leu His Cys Arg Ala Phe Pro Ala Thr Gln Ile Tyr Phe Lys
 65 70 75 80
 Cys Asn Gly Glu Trp Val Ser Gln Lys Gly His Val Thr Gln Glu Ser
 85 90 95
 Leu Asp Glu Ala Thr Gly Leu Arg Ile Arg Glu Val Gln Ile Glu Val
 100 105 110
 Ser Arg Gln Gln Val Glu Glu Leu Phe Gly Leu Glu Asp Tyr Trp Cys
 115 120 125
 Gln Cys Val Ala Trp Ser Ser Ser Gly Thr Thr Lys Ser Arg Arg Ala
 130 135 140
 Tyr Ile Arg Ile Ala Tyr Leu Arg Lys Asn Phe Asp Gln Glu Pro Leu
 145 150 155 160
 Ala Lys Glu Val Pro Leu Asp His Glu Val Leu Leu Gln Cys Arg Pro
 165 170 175
 Pro Glu Gly Val Pro Val Ala Glu Val Glu Trp Leu Lys Asn Glu Asp
 180 185 190
 Val Ile Asp Pro Ala Gln Asp Thr Asn Phe Leu Leu Thr Ile Asp His
 195 200 205
 Asn Leu Ile Ile Arg Gln Ala Arg Leu Ser Asp Thr Ala Asn Tyr Thr
 210 215 220
 Cys Val Ala Lys Asn Ile Val Ala Lys Arg Arg Ser Thr Thr Ala Thr
 225 230 235 240
 Val Ile Val Tyr Val Asn Gly Gly Trp Ser Ser Trp Ala Glu Trp Ser
 245 250 255
 Pro Cys Ser Asn Arg Cys Gly Arg Gly Trp Gln Lys Arg Thr Arg Thr
 260 265 270
 Cys Thr Asn Pro Ala Pro Leu Asn Gly Gly Ala Phe Cys Glu Gly Gln
 275 280 285
 Ala Cys Gln Lys Thr Ala Cys Thr Thr Val Cys Pro Val Asp Gly Ala
 290 295 300
 Trp Thr Glu Trp Ser Lys Trp Ser Ala Cys Ser Thr Glu Cys Ala His
 305 310 315 320

Trp Arg Ser Arg Glu Cys Met Ala Pro Pro Pro Gln Asn Gly Gly Arg
 325 330 335
 Asp Cys Ser Gly Thr Leu Leu Asp Ser Lys Asn Cys Thr Asp Gly Leu
 340 345 350
 Cys Val Leu Asn Gln Arg Thr Leu Asn Asp Pro Lys Ser Arg Pro Leu
 355 360 365
 Glu Pro Ser Gly Asp Val Ala Leu Tyr Ala Gly Leu Val Val Ala Val
 370 375 380
 Phe Val Val Leu Ala Val Leu Met Ala Val Gly Val Ile Val Tyr Arg
 385 390 395 400
 Arg Asn Cys Arg Asp Phe Asp Thr Asp Ile Thr Asp Ser Ser Ala Ala
 405 410 415
 Leu Thr Gly Gly Phe His Pro Val Asn Phe Lys Thr Ala Arg Pro Ser
 420 425 430
 Asn Pro Gln Leu Leu His Pro Ser Ala Pro Pro Asp Leu Thr Ala Ser
 435 440 445
 Ala Gly Ile Tyr Arg Gly Pro Val Tyr Ala Leu Gln Asp Ser Ala Asp
 450 455 460
 Lys Ile Pro Met Thr Asn Ser Pro Leu Leu Asp Pro Leu Pro Ser Leu
 465 470 475 480
 Lys Ile Lys Val Tyr Asp Ser Ser Thr Ile Gly Ser Gly Ala Gly Leu
 485 490 495
 Ala Asp Gly Ala Asp Leu Leu Gly Val Leu Pro Pro Gly Thr Tyr Pro
 500 505 510
 Gly Asp Phe Ser Arg Asp Thr His Phe Leu His Leu Arg Ser Ala Ser
 515 520 525
 Leu Gly Ser Gln His Leu Leu Gly Leu Pro Arg Asp Pro Ser Ser Ser
 530 535 540
 Val Ser Gly Thr Phe Gly Cys Leu Gly Gly Arg Leu Thr Ile Pro Gly
 545 550 555 560
 Thr Gly Val Ser Leu Leu Val Pro Asn Gly Ala Ile Pro Gln Gly Lys
 565 570 575
 Phe Tyr Asp Leu Tyr Leu Arg Ile Asn Lys Thr Glu Ser Thr Leu Pro
 580 585 590
 Leu Ser Glu Gly Ser Gln Thr Val Leu Ser Pro Ser Val Thr Cys Gly
 595 600 605
 Pro Thr Gly Leu Leu Leu Cys Arg Pro Val Val Leu Thr Val Pro His
 610 615 620

Cys Ala Glu Val Ile Ala Gly Asp Trp Ile Phe Gln Leu Lys Thr Gln
 625 630 635 640
 Ala His Gln Gly His Trp Glu Glu Val Val Thr Leu Asp Glu Glu Thr
 645 650 655
 Leu Asn Thr Pro Cys Tyr Cys Gln Leu Glu Ala Lys Ser Cys His Ile
 660 665 670
 Leu Leu Asp Gln Leu Gly Thr Tyr Val Phe Thr Gly Glu Ser Tyr Ser
 675 680 685
 Arg Ser Ala Val Lys Arg Leu Gln Leu Ala Ile Phe Ala Pro Ala Leu
 690 695 700
 Cys Thr Ser Leu Glu Tyr Ser Leu Arg Val Tyr Cys Leu Glu Asp Thr
 705 710 715 720
 Pro Ala Ala Leu Lys Glu Val Leu Glu Leu Glu Arg Thr Leu Gly Gly
 725 730 735
 Tyr Leu Val Glu Glu Pro Lys Thr Leu Leu Phe Lys Asp Ser Tyr His
 740 745 750
 Asn Leu Arg Leu Ser Leu His Asp Ile Pro His Ala His Trp Arg Ser
 755 760 765
 Lys Leu Leu Ala Lys Tyr Gln Glu Ile Pro Phe Tyr His Val Trp Asn
 770 775 780
 Gly Ser Gln Lys Ala Leu His Cys Thr Phe Thr Leu Glu Arg His Ser
 785 790 795 800
 Leu Ala Ser Thr Glu Phe Thr Cys Lys Val Cys Val Arg Gln Val Glu
 805 810 815
 Gly Glu Gly Gln Ile Phe Gln Leu His Thr Thr Leu Ala Glu Thr Pro
 820 825 830
 Ala Gly Ser Leu Asp Ala Leu Cys Ser Ala Pro Gly Asn Ala Ala Thr
 835 840 845
 Thr Gln Leu Gly Pro Tyr Ala Phe Lys Ile Pro Leu Ser Ile Arg Gln
 850 855 860
 Lys Ile Cys Asn Ser Leu Asp Ala Pro Asn Ser Arg Gly Asn Asp Trp
 865 870 875 880
 Arg Leu Leu Ala Gln Lys Leu Ser Met Asp Arg Tyr Leu Asn Tyr Phe
 885 890 895
 Ala Thr Lys Ala Ser Pro Thr Gly Val Ile Leu Asp Leu Trp Glu Ala
 900 905 910
 Arg Gln Gln Asp Asp Gly Asp Leu Asn Ser Leu Ala Ser Ala Leu Glu
 915 920 925

Glu Met Gly Lys Ser Glu Met Leu Val Ala Met Thr Thr Asp Gly Asp
 930 935 940

Cys
 945

<210> 122
 <211> 104
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: U5 Consensus
 Sequence

<400> 122
 Pro Ser Phe Leu Val Ser Gly Thr Phe Asp Ala Arg Gly Gly Arg Leu
 1 5 10 15
 Arg Gly Pro Arg Thr Gly Val Arg Leu Ile Ile Pro Pro Gly Ala Ile
 20 25 30
 Pro Gln Gly Thr Arg Tyr Thr Cys Tyr Leu Val Val His Asp Lys Leu
 35 40 45
 Ser Thr Pro Pro Pro Leu Glu Glu Gly Glu Thr Leu Leu Ser Pro Val
 50 55 60
 Val Glu Cys Gly Pro His Gly Ala Leu Phe Leu Arg Pro Val Ile Leu
 65 70 75 80
 Glu Val Pro His Cys Ala Ser Leu Arg Pro Arg Asp Trp Glu Ile Val
 85 90 95
 Leu Leu Arg Ser Glu Asn Gly Gly
 100

<210> 123
 <211> 104
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: U5 Consensus
 Sequence

<400> 123
 Ser Gly Phe Leu Val Ser Gly Thr Phe Asp Ala Arg Gly Gly Arg Leu
 1 5 10 15
 Arg Gly Pro Arg Thr Gly Val Arg Leu Ile Ile Pro Pro Gly Ala Ile
 20 25 30
 Pro Gln Gly Thr Arg Tyr Thr Cys Tyr Leu Val Val His Asp Lys Leu
 35 40 45

Ser Thr Pro Pro Pro Leu Glu Glu Gly Glu Thr Leu Leu Ser Pro Val
50 55 60

Val Glu Cys Gly Pro His Gly Ala Leu Phe Leu Arg Pro Val Ile Leu
65 70 75 80

Glu Val Pro His Cys Ala Ser Leu Arg Pro Arg Asp Trp Glu Leu Val
85 90 95

Leu Leu Arg Ser Glu Asn Gly Gly
100

<210> 124
<211> 96
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DEATH domain
Consensus Sequence

<400> 124
Pro Pro Gly Ala Ala Ser Leu Thr Glu Leu Thr Arg Glu Lys Leu Ala
1 5 10 15

Lys Leu Leu Asp His Asp Leu Gly Asp Asp Trp Arg Glu Leu Ala Arg
20 25 30

Lys Leu Gly Leu Ser Glu Ala Asp Ile Asp Gln Ile Glu Thr Glu Ser
35 40 45

Pro Arg Asp Leu Ala Glu Gln Ser Tyr Gln Leu Leu Arg Leu Trp Glu
50 55 60

Gln Arg Glu Gly Lys Asn Ala Thr Leu Gly Thr Leu Leu Glu Ala Leu
65 70 75 80

Arg Lys Met Gly Arg Asp Asp Ala Val Glu Leu Leu Arg Ser Glu Leu
85 90 95

<210> 125
<211> 51
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Thrombospondin
Type 1 Consensus Sequence

<400> 125
Trp Gly Glu Trp Ser Glu Trp Ser Pro Cys Ser Val Thr Cys Gly Gly

1 5 10 15
 Gly Val Gln Thr Arg Thr Arg Cys Cys Asn Pro Pro Pro Asn Gly Gly
 20 25 30
 Gly Pro Cys Thr Gly Pro Asp Thr Glu Thr Arg Ala Cys Asn Glu Gln
 35 40 45
 Pro Cys Pro
 50

<210> 126
 <211> 83
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Death Domain
 Consensus Sequence

<400> 126
 Arg Glu Leu Cys Lys Leu Leu Asp Asp Pro Leu Gly Arg Asp Trp Arg
 1 5 10 15
 Arg Leu Ala Arg Lys Leu Gly Leu Ser Glu Glu Glu Ile Asp Gln Ile
 20 25 30
 Glu His Glu Asn Pro Arg Leu Ala Ser Pro Thr Tyr Gln Leu Leu Asp
 35 40 45
 Leu Trp Glu Gln Arg Gly Gly Lys Asn Ala Thr Val Gly Thr Leu Leu
 50 55 60
 Glu Ala Leu Arg Lys Met Gly Arg Asp Asp Ala Val Glu Leu Leu Glu
 65 70 75 80
 Ser Ala Leu

<210> 127
 <211> 48
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Thrombospondin
 Type 1 Consensus Sequence

<400> 127
 Ser Pro Trp Ser Glu Trp Ser Pro Cys Ser Val Thr Cys Gly Lys Gly
 1 5 10 15
 Ile Arg Thr Arg Gln Arg Thr Cys Asn Ser Pro Ala Gly Gly Lys Pro
 20 25 30

Cys Thr Gly Asp Ala Gln Glu Thr Glu Ala Cys Met Met Asp Pro Cys
 35 40 45

<210> 128
 <211> 63
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Immunoglobulin
 C-2 Consensus Sequence

<400> 128
 Leu Glu Gly Glu Ser Val Thr Leu Thr Cys Pro Ala Ser Gly Asp Pro
 1 5 10 15
 Val Pro Asn Ile Thr Trp Leu Lys Asp Gly Lys Pro Leu Pro Glu Ser
 20 25 30
 Arg Val Val Ala Ser Gly Ser Thr Leu Thr Ile Lys Asn Val Ser Leu
 35 40 45
 Glu Asp Ser Gly Leu Tyr Thr Cys Val Ala Arg Asn Ser Val Gly
 50 55 60

<210> 129
 <211> 56
 <212> PRT
 <213> Rattus norvegicus

<400> 129
 Leu Phe Ala Gln Leu Ala Gln Leu Leu Pro Ala Thr Met Ser Asp Lys
 1 5 10 15
 Pro Asp Met Ala Glu Ile Glu Lys Phe Asp Lys Ser Lys Leu Lys Lys
 20 25 30
 Thr Glu Thr Gln Glu Lys Asn Pro Leu Pro Ser Lys Glu Thr Ile Glu
 35 40 45
 Gln Glu Lys Gln Ala Gly Glu Ser
 50 55

<210> 130
 <211> 343
 <212> PRT
 <213> Homo sapiens

<400> 130
 Met Ala Gln Lys Gly Val Leu Gly Pro Gly Gln Leu Gly Ala Val Ala
 1 5 10 15

Ile Leu Leu Tyr Leu Gly Leu Leu Arg Ser Gly Thr Gly Ala Glu Gly
 20 25 30
 Ala Glu Ala Pro Cys Gly Val Ala Pro Gln Ala Arg Ile Thr Gly Gly
 35 40 45
 Ser Ser Ala Val Ala Gly Gln Trp Pro Trp Gln Val Ser Ile Thr Tyr
 50 55 60
 Glu Gly Val His Val Cys Gly Gly Ser Leu Val Ser Glu Gln Trp Val
 65 70 75 80
 Leu Ser Ala Ala His Cys Phe Pro Ser Glu His His Lys Glu Ala Tyr
 85 90 95
 Glu Val Lys Leu Gly Ala His Gln Leu Asp Ser Tyr Ser Glu Asp Ala
 100 105 110
 Lys Val Ser Thr Leu Lys Asp Ile Ile Pro His Pro Ser Tyr Leu Gln
 115 120 125
 Glu Gly Ser Gln Gly Asp Ile Ala Leu Leu Gln Leu Ser Arg Pro Ile
 130 135 140
 Thr Phe Ser Arg Tyr Ile Arg Pro Ile Cys Leu Pro Ala Ala Asn Ala
 145 150 155 160
 Ser Phe Pro Asn Gly Leu His Cys Thr Val Thr Gly Trp Gly His Val
 165 170 175
 Ala Pro Ser Val Ser Leu Leu Thr Pro Lys Pro Leu Gln Gln Leu Glu
 180 185 190
 Val Pro Leu Ile Ser Arg Glu Thr Cys Asn Cys Leu Tyr Asn Ile Asp
 195 200 205
 Ala Lys Pro Glu Glu Pro His Phe Val Gln Glu Asp Met Val Cys Ala
 210 215 220
 Gly Tyr Val Glu Gly Gly Lys Asp Ala Cys Gln Gly Asp Ser Gly Gly
 225 230 235 240
 Pro Leu Ser Cys Pro Val Glu Gly Leu Trp Tyr Leu Thr Gly Ile Val
 245 250 255
 Ser Trp Gly Asp Ala Cys Gly Ala Arg Asn Arg Pro Gly Val Tyr Thr
 260 265 270
 Leu Ala Ser Ser Tyr Ala Ser Trp Ile Gln Ser Lys Val Thr Glu Leu
 275 280 285
 Gln Pro Arg Val Val Pro Gln Thr Gln Glu Ser Gln Pro Asp Ser Asn
 290 295 300
 Leu Cys Gly Ser His Leu Ala Phe Ser Ser Ala Pro Ala Gln Gly Leu
 305 310 315 320

Leu Arg Pro Ile Leu Phe Leu Pro Leu Gly Leu Ala Leu Gly Leu Leu
325 330 335

Ser Pro Trp Leu Ser Glu His
340

<210> 131

<211> 389

<212> PRT

<213> *Xenopus laevis*

<400> 131

Met Leu Gln Tyr Leu Ser Phe Val Leu Ile Phe Ile His His Gln Ala
1 5 10 15

Cys Gly Val Pro Val Ile Ser Asn Arg Ile Val Gly Gly Met Asp Ser
20 25 30

Lys Arg Gly Glu Trp Pro Trp Gln Ile Ser Leu Ser Tyr Lys Ser Asp
35 40 45

Ser Ile Cys Gly Gly Ser Leu Leu Thr Asp Ser Trp Val Met Thr Ala
50 55 60

Ala His Cys Ile Asp Ser Leu Asp Val Ser Tyr Tyr Thr Val Tyr Leu
65 70 75 80

Gly Ala Tyr Gln Leu Ser Ala Pro Asp Asn Ser Thr Val Ser Arg Gly
85 90 95

Val Lys Ser Ile Thr Lys His Pro Asp Phe Gln Tyr Glu Gly Ser Ser
100 105 110

Gly Asp Ile Ala Leu Ile Glu Leu Glu Lys Pro Val Thr Phe Thr Pro
115 120 125

Tyr Ile Leu Pro Ile Cys Leu Pro Ser Gln Asp Val Gln Phe Ala Ala
130 135 140

Gly Thr Met Cys Trp Val Thr Gly Trp Gly Asn Ile Gln Glu Gly Thr
145 150 155 160

Pro Leu Ile Ser Pro Lys Thr Ile Gln Lys Ala Glu Val Ala Ile Ile
165 170 175

Asp Ser Ser Val Cys Gly Thr Met Tyr Glu Ser Ser Leu Gly Tyr Ile
180 185 190

Pro Asp Phe Ser Phe Ile Gln Glu Asp Met Val Cys Ala Gly Tyr Lys
195 200 205

Glu Gly Arg Ile Asp Ala Cys Gln Gly Asp Ser Gly Gly Pro Leu Val
210 215 220

Cys Asn Val Asn Asn Val Trp Leu Gln Leu Gly Ile Val Ser Trp Gly

225 230 235 240
 Tyr Gly Cys Ala Glu Pro Asn Arg Pro Gly Val Tyr Thr Lys Val Gln
 245 250 255
 Tyr Tyr Gln Asp Trp Leu Lys Thr Asn Val Pro Leu Ile Val Phe Ser
 260 265 270
 Glu Glu Gly Pro Ser Val Ala Pro Ser Ile Gly Pro Ser Ile Ala Pro
 275 280 285
 Ser Phe Gly Pro Ser Leu Gly Pro Arg Gly Val Ala Ser Thr Thr Ile
 290 295 300
 Ser Gln Thr Glu Ala Gln Ser Val Asn Ser Ile Glu Ile Asp Lys Thr
 305 310 315
 Asn Ser Thr Thr Ile Phe Glu Thr Glu Ala Met Ser Met Ser Asn Asn
 325 330 335
 Thr Thr Met Asn Glu Thr Phe Ser Leu Val Ser Ser Thr Ile Ser Thr
 340 345 350
 Ala Leu Arg Ile Asn Glu Thr Lys Thr Ile Asp Asn Glu Ala Gln Ile
 355 360 365
 His Ala Cys Ser Leu His Thr Ile Ala Leu Thr Leu Ile Tyr Leu Phe
 370 375 380
 Ile Arg Phe Phe Val
 385

<210> 132
 <211> 855
 <212> PRT
 <213> Homo sapiens

<400> 132
 Met Gly Ser Asp Arg Ala Arg Lys Gly Gly Gly Gly Pro Lys Asp Phe
 1 5 10 15
 Gly Ala Gly Leu Lys Tyr Asn Ser Arg His Glu Lys Val Asn Gly Leu
 20 25 30
 Glu Glu Gly Val Glu Phe Leu Pro Val Asn Asn Val Lys Lys Val Glu
 35 40 45
 Lys His Gly Pro Gly Arg Trp Val Val Leu Ala Ala Val Leu Ile Gly
 50 55 60
 Leu Leu Leu Val Leu Leu Gly Ile Gly Phe Leu Val Trp His Leu Gln
 65 70 75 80
 Tyr Arg Asp Val Arg Val Gln Lys Val Phe Asn Gly Tyr Met Arg Ile
 85 90 95

Thr	Asn	Glu	Asn	Phe	Val	Asp	Ala	Tyr	Glu	Asn	Ser	Asn	Ser	Thr	Glu	
			100					105					110			
Phe	Val	Ser	Leu	Ala	Ser	Lys	Val	Lys	Asp	Ala	Leu	Lys	Leu	Leu	Tyr	
		115					120					125				
Ser	Gly	Val	Pro	Phe	Leu	Gly	Pro	Tyr	His	Lys	Glu	Ser	Ala	Val	Thr	
	130					135					140					
Ala	Phe	Ser	Glu	Gly	Ser	Val	Ile	Ala	Tyr	Tyr	Trp	Ser	Glu	Phe	Ser	
145					150					155					160	
Ile	Pro	Gln	His	Leu	Val	Glu	Glu	Ala	Glu	Arg	Val	Met	Ala	Glu	Glu	
			165						170					175		
Arg	Val	Val	Met	Leu	Pro	Pro	Arg	Ala	Arg	Ser	Leu	Lys	Ser	Phe	Val	
			180					185					190			
Val	Thr	Ser	Val	Val	Ala	Phe	Pro	Thr	Asp	Ser	Lys	Thr	Val	Gln	Arg	
		195					200					205				
Thr	Gln	Asp	Asn	Ser	Cys	Ser	Phe	Gly	Leu	His	Ala	Arg	Gly	Val	Glu	
	210					215					220					
Leu	Met	Arg	Phe	Thr	Thr	Pro	Gly	Phe	Pro	Asp	Ser	Pro	Tyr	Pro	Ala	
225					230					235					240	
His	Ala	Arg	Cys	Gln	Trp	Ala	Leu	Arg	Gly	Asp	Ala	Asp	Ser	Val	Leu	
			245						250					255		
Ser	Leu	Thr	Phe	Arg	Ser	Phe	Asp	Leu	Ala	Ser	Cys	Asp	Glu	Arg	Gly	
		260						265					270			
Ser	Asp	Leu	Val	Thr	Val	Tyr	Asn	Thr	Leu	Ser	Pro	Met	Glu	Pro	His	
	275						280					285				
Ala	Leu	Val	Gln	Leu	Cys	Gly	Thr	Tyr	Pro	Pro	Ser	Tyr	Asn	Leu	Thr	
	290					295					300					
Phe	His	Ser	Ser	Gln	Asn	Val	Leu	Leu	Ile	Thr	Leu	Ile	Thr	Asn	Thr	
305				310					315					320		
Glu	Arg	Arg	His	Pro	Gly	Phe	Glu	Ala	Thr	Phe	Phe	Gln	Leu	Pro	Arg	
			325						330				335			
Met	Ser	Ser	Cys	Gly	Gly	Arg	Leu	Arg	Lys	Ala	Gln	Gly	Thr	Phe	Asn	
		340					345					350				
Ser	Pro	Tyr	Tyr	Pro	Gly	His	Tyr	Pro	Pro	Asn	Ile	Asp	Cys	Thr	Trp	
	355					360					365					
Asn	Ile	Glu	Val	Pro	Asn	Asn	Gln	His	Val	Lys	Val	Arg	Phe	Lys	Phe	
	370					375					380					
Phe	Tyr	Leu	Leu	Glu	Pro	Gly	Val	Pro	Ala	Gly	Thr	Cys	Pro	Lys	Asp	
385					390					395					400	

Tyr Val Glu Ile Asn Gly Glu Lys Tyr Cys Gly Glu Arg Ser Gln Phe
 405 410 415
 Val Val Thr Ser Asn Ser Asn Lys Ile Thr Val Arg Phe His Ser Asp
 420 425 430
 Gln Ser Tyr Thr Asp Thr Gly Phe Leu Ala Glu Tyr Leu Ser Tyr Asp
 435 440 445
 Ser Ser Asp Pro Cys Pro Gly Gln Phe Thr Cys Arg Thr Gly Arg Cys
 450 455 460
 Ile Arg Lys Glu Leu Arg Cys Asp Gly Trp Ala Asp Cys Thr Asp His
 465 470 475 480
 Ser Asp Glu Leu Asn Cys Ser Cys Asp Ala Gly His Gln Phe Thr Cys
 485 490 495
 Lys Asn Lys Phe Cys Lys Pro Leu Phe Trp Val Cys Asp Ser Val Asn
 500 505 510
 Asp Cys Gly Asp Asn Ser Asp Glu Gln Gly Cys Ser Cys Pro Ala Gln
 515 520 525
 Thr Phe Arg Cys Ser Asn Gly Lys Cys Leu Ser Lys Ser Gln Gln Cys
 530 535 540
 Asn Gly Lys Asp Asp Cys Gly Asp Gly Ser Asp Glu Ala Ser Cys Pro
 545 550 555 560
 Lys Val Asn Val Val Thr Cys Thr Lys His Thr Tyr Arg Cys Leu Asn
 565 570 575
 Gly Leu Cys Leu Ser Lys Gly Asn Pro Glu Cys Asp Gly Lys Glu Asp
 580 585 590
 Cys Ser Asp Gly Ser Asp Glu Lys Asp Cys Asp Cys Gly Leu Arg Ser
 595 600 605
 Phe Thr Arg Gln Ala Arg Val Val Gly Gly Thr Asp Ala Asp Glu Gly
 610 615 620
 Glu Trp Pro Trp Gln Val Ser Leu His Ala Leu Gly Gln Gly His Ile
 625 630 635 640
 Cys Gly Ala Ser Leu Ile Ser Pro Asn Trp Leu Val Ser Ala Ala His
 645 650 655
 Cys Tyr Ile Asp Asp Arg Gly Phe Arg Tyr Ser Asp Pro Thr Gln Trp
 660 665 670
 Thr Val Phe Leu Gly Leu His Asp Gln Ser Gln Arg Ser Ala Pro Gly
 675 680 685
 Val Gln Glu Arg Arg Leu Lys Arg Ile Ile Ser His Pro Phe Phe Asn
 690 695 700

Asp Phe Thr Phe Asp Tyr Asp Ile Ala Leu Leu Glu Leu Glu Lys Pro
 705 710 715 720
 Ala Glu Tyr Ser Ser Met Val Arg Pro Ile Cys Leu Pro Asp Ala Ser
 725 730 735
 His Val Phe Pro Ala Gly Lys Ala Ile Trp Val Thr Gly Trp Gly His
 740 745 750
 Thr Gln Tyr Gly Gly Thr Gly Ala Leu Ile Leu Gln Lys Gly Glu Ile
 755 760 765
 Arg Val Ile Asn Gln Thr Thr Cys Glu Asn Leu Leu Pro Gln Gln Ile
 770 775 780
 Thr Pro Arg Met Met Cys Val Gly Phe Leu Ser Gly Gly Val Asp Ser
 785 790 795 800
 Cys Gln Gly Asp Ser Gly Gly Pro Leu Ser Ser Val Glu Ala Asp Gly
 805 810 815
 Arg Ile Phe Gln Ala Gly Val Val Ser Trp Gly Asp Gly Cys Ala Gln
 820 825 830
 Arg Asn Lys Pro Gly Val Tyr Thr Arg Leu Pro Leu Phe Arg Asp Trp
 835 840 845
 Ile Lys Glu Asn Thr Gly Val
 850 855

 <210> 133
 <211> 342
 <212> PRT
 <213> Rattus norvegicus

 <400> 133
 Met Ala Leu Arg Val Gly Leu Gly Leu Gly Gln Leu Glu Ala Leu Phe
 1 5 10 15
 Val Leu Leu Leu Ile Gly Leu Leu Gln Ser Arg Ile Gly Ala Asp Gly
 20 25 30
 Thr Glu Ala Ser Cys Gly Ala Val Ile Gln Pro Arg Ile Thr Gly Gly
 35 40 45
 Gly Ser Ala Lys Pro Gly Gln Trp Pro Trp Gln Val Ser Ile Thr Tyr
 50 55 60
 Asn Gly Val His Val Cys Gly Gly Ser Leu Val Ser Asn Gln Trp Val
 65 70 75 80
 Val Ser Ala Ala His Cys Phe Pro Arg Glu His Ser Lys Glu Glu Tyr
 85 90 95
 Glu Val Lys Leu Gly Ala His Gln Leu Asp Ser Phe Ser Asn Asp Ile
 100 105 110

Val Val His Thr Val Ala Gln Ile Ile Ser His Ser Ser Tyr Arg Glu
 115 120 125
 Glu Gly Ser Gln Gly Asp Ile Ala Leu Ile Arg Leu Ser Ser Pro Val
 130 135 140
 Thr Phe Ser Arg Tyr Ile Arg Pro Ile Cys Leu Pro Ala Ala Asn Ala
 145 150 155 160
 Ser Phe Pro Asn Gly Leu His Cys Thr Val Thr Gly Trp Gly His Val
 165 170 175
 Ala Pro Ser Val Ser Leu Gln Thr Pro Arg Pro Leu Gln Gln Leu Glu
 180 185 190
 Val Pro Leu Ile Ser Arg Glu Thr Cys Ser Cys Leu Tyr Asn Ile Asn
 195 200 205
 Ala Val Pro Glu Glu Pro His Thr Ile Gln Gln Asp Met Leu Cys Ala
 210 215 220
 Gly Tyr Val Lys Gly Gly Lys Asp Ala Cys Gln Gly Asp Ser Gly Gly
 225 230 235 240
 Pro Leu Ser Cys Pro Ile Asp Gly Leu Trp Tyr Leu Ala Gly Ile Val
 245 250 255
 Ser Trp Gly Asp Ala Cys Gly Ala Pro Asn Arg Pro Gly Val Tyr Thr
 260 265 270
 Leu Thr Ser Thr Tyr Ala Ser Trp Ile His His His Val Ala Glu Leu
 275 280 285
 Gln Pro Arg Val Val Pro Gln Thr Gln Glu Ser Gln Pro Asp Gly His
 290 295 300
 Leu Cys Asn His His Pro Val Phe Asn Leu Ala Ala Ala Gln Lys Leu
 305 310 315 320
 Ser Arg Pro Ile Leu Phe Leu Pro Leu Ser Leu Thr Leu Gly Leu Phe
 325 330 335
 Ser Leu Trp Leu Glu His
 340

<210> 134
 <211> 342
 <212> PRT
 <213> Rattus norvegicus

<400> 134
 Met Ala Leu Arg Val Gly Leu Gly Leu Gly Gln Leu Glu Ala Leu Phe
 1 5 10 15
 Ile Leu Leu Leu Ile Gly Leu Leu Gln Ser Arg Ile Gly Ala Asp Gly

20					25					30					
Thr	Glu	Ala	Ser	Cys	Gly	Ala	Val	Ile	Gln	Pro	Arg	Ile	Thr	Gly	Gly
		35					40					45			
Gly	Ser	Ala	Lys	Pro	Gly	Gln	Trp	Pro	Trp	Gln	Val	Ser	Ile	Thr	Tyr
	50					55					60				
Asn	Gly	Val	His	Val	Cys	Gly	Gly	Ser	Leu	Val	Ser	Asn	Gln	Trp	Val
65					70					75					80
Val	Ser	Ala	Ala	His	Cys	Phe	Pro	Arg	Glu	His	Ser	Lys	Glu	Glu	Tyr
				85					90					95	
Glu	Val	Lys	Leu	Gly	Ala	His	Gln	Leu	Asp	Ser	Phe	Ser	Asn	Asp	Ile
			100					105					110		
Val	Val	His	Thr	Val	Ala	Gln	Ile	Ile	Ser	His	Ser	Ser	Tyr	Arg	Glu
		115					120						125		
Glu	Gly	Ser	Gln	Gly	Asp	Ile	Ala	Leu	Ile	Arg	Leu	Ser	Ser	Pro	Val
	130					135					140				
Thr	Phe	Ser	Arg	Tyr	Ile	Arg	Pro	Ile	Cys	Leu	Pro	Ala	Ala	Asn	Ala
145					150					155					160
Ser	Phe	Pro	Asn	Gly	Leu	His	Cys	Thr	Val	Thr	Gly	Trp	Gly	His	Val
				165					170					175	
Ala	Pro	Ser	Val	Ser	Leu	Gln	Thr	Pro	Arg	Pro	Leu	Gln	Gln	Leu	Glu
			180					185					190		
Val	Pro	Leu	Ile	Ser	Arg	Glu	Thr	Cys	Ser	Cys	Leu	Tyr	Asn	Ile	Asn
		195					200					205			
Ala	Val	Pro	Glu	Glu	Pro	His	Thr	Ile	Gln	Gln	Asp	Met	Leu	Cys	Ala
	210					215					220				
Gly	Tyr	Val	Lys	Gly	Gly	Lys	Asp	Ala	Cys	Gln	Gly	Asp	Ser	Gly	Gly
225					230					235					240
Pro	Leu	Ser	Cys	Pro	Ile	Asp	Gly	Leu	Trp	Tyr	Leu	Ala	Gly	Ile	Val
				245					250					255	
Ser	Trp	Gly	Asp	Ala	Cys	Gly	Ala	Pro	Asn	Arg	Pro	Gly	Val	Tyr	Thr
			260					265					270		
Leu	Thr	Ser	Thr	Tyr	Ala	Ser	Trp	Ile	His	His	His	Val	Ala	Glu	Leu
		275					280					285			
Gln	Pro	Arg	Ala	Val	Pro	Gln	Thr	Gln	Glu	Ser	Gln	Pro	Asp	Gly	His
	290					295					300				
Leu	Cys	Asn	His	His	Pro	Val	Phe	Asn	Leu	Ala	Ala	Ala	Gln	Lys	Leu
305					310					315					320
Ser	Arg	Pro	Ile	Leu	Phe	Leu	Pro	Leu	Ser	Leu	Thr	Leu	Gly	Leu	Phe

Ser Tyr Leu Asp Trp Ile
 225 230

<210> 136
 <211> 217
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Trypsin
 Consensus Sequence

<400> 136
 Ile Val Gly Gly Arg Glu Ala Gln Ala Gly Ser Phe Pro Trp Gln Val
 1 5 10 15
 Ser Leu Gln Val Ser Ser Gly His Phe Cys Gly Gly Ser Leu Ile Ser
 20 25 30
 Glu Asn Trp Val Leu Thr Ala Ala His Cys Val Ser Gly Ala Ser Ser
 35 40 45
 Val Arg Val Val Leu Gly Glu His Asn Leu Gly Thr Thr Glu Gly Thr
 50 55 60
 Glu Gln Lys Phe Asp Val Lys Lys Ile Ile Val His Pro Asn Tyr Asn
 65 70 75 80
 Pro Asp Thr Asn Asp Ile Ala Leu Leu Lys Leu Lys Ser Pro Val Thr
 85 90 95
 Leu Gly Asp Thr Val Arg Pro Ile Cys Leu Pro Ser Ala Ser Ser Asp
 100 105 110
 Leu Pro Val Gly Thr Thr Cys Ser Val Ser Gly Trp Gly Arg Thr Lys
 115 120 125
 Asn Leu Gly Thr Ser Asp Thr Leu Gln Glu Val Val Val Pro Ile Val
 130 135 140
 Ser Arg Glu Thr Cys Arg Ser Ala Tyr Gly Gly Thr Val Thr Asp Thr
 145 150 155 160
 Met Ile Cys Ala Gly Ala Leu Gly Gly Lys Asp Ala Cys Gln Gly Asp
 165 170 175
 Ser Gly Gly Pro Leu Val Cys Ser Asp Gly Glu Leu Val Gly Ile Val
 180 185 190
 Ser Trp Gly Tyr Gly Cys Ala Val Gly Asn Tyr Pro Gly Val Tyr Thr
 195 200 205
 Arg Val Ser Arg Tyr Leu Asp Trp Ile
 210 215

<210> 137
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV2a and b
 Primer 1

 <400> 137
 tcaaattgttc agtttttgatt gttgttcttg 30

 <210> 138
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV2a and b
 Primer 2

 <400> 138
 tttttgctaa aagcagcaat gccat 25

 <210> 139
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV2c Primer 1

 <400> 139
 attgacttat gcttcctagt tcgttgc 27

 <210> 140
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 <223> Description of Artificial Sequence: NOV2c Primer 2

 <400> 140
 caacatttaa aagaatggac gattttca 28

 <210> 141
 <211> 25
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<223> Description of Artificial Sequence: NOV2d Primer 1

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ctgtattccg gatcgatgca agaag 25

<210> 142
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<223> Description of Artificial Sequence: NOV2d Primer 2

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tcttaaggag aagaaaatct gccgaag 27

<210> 143
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<223> Description of Artificial Sequence: NOV3a Primer 1

<400> 143
tggaactct aaaaagcaga gcgcctc 27

<210> 144
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<223> Description of Artificial Sequence: NOV3a Primer 2

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cctctagtg agtcagtgcg tcactct 27

<210> 145
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<223> Description of Artificial Sequence: NOV6 Primer 1

<400> 145
atggggggcc tgacagc 17

<210> 146
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<220>

<223> Description of Artificial Sequence: NOV6 Primer 2

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ttatgtggca cagtccatag tctgc 25

<210> 147
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<223> Description of Artificial Sequence: NOV8 Primer 1

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atgatatgtc ttccacatta ctgacattca 30

<210> 148
<211> 26
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<223> Description of Artificial Sequence: NOV8 Primer 2

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ttagagccac aaactaacca gtcacat 26

<210> 149
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<223> Description of Artificial Sequence: Ag3802 Forward
Primer

<400> 149
gtcgatggga catctttcct 20

<210> 150
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<223> Description of Artificial Sequence: Ag3802 Probe
Primer

<400> 150
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<210> 151
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 <223> Description of Artificial Sequence: Ag3802 Reverse
 Primer

 <400> 151
 atgaggaagt agcccacgtt 20

 <210> 152
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 <220>
 <223> Description of Artificial Sequence: Ag4849 Forward
 Primer

 <400> 152
 gccagttcta cctcaagttc ct 22

 <210> 153
 <211> 24
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 <220>
 <223> Description of Artificial Sequence: Ag4849 Probe
 Primer

 <400> 153
 ctaccaccat gtgtcccgcc gttt 24

 <210> 154
 <211> 22
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 <220>
 <223> Description of Artificial Sequence: Ag4849 Reverse
 Primer

 <400> 154
 catagtcaga gtcgagcagg aa 22

 <210> 155
 <211> 19
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Ag400 Forward
Primer

<400> 155
acgatacctgg gctggacag 19

<210> 156
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Ag400 Probe
Primer

<400> 156
catctgcgcg tagccctcc a 21

<210> 157
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Ag400 Reverse
Primer

<400> 157
gcttcaaccc cctcgagttc 20

<210> 158
<211> 22
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Ag2866 Forward
Primer

<400> 158
tatgtactcg tggccctga ga 22

<210> 159
<211> 26
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<220>

<223> Description of Artificial Sequence: Ag2866 Probe
Primer

<400> 159
acgtctacag ctttggtac ctccgg 26

<210> 160
<211> 22
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<220>
<223> Description of Artificial Sequence: Ag2866 Reverse
Primer

<400> 160
agtggctgat gaagtcata ga 22

<210> 161
<211> 19
<212> DNA
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<220>
<223> Description of Artificial Sequence: Ag3077 Forward
Primer

<400> 161
aatgtggagc tgtgcctgt 19

<210> 162
<211> 23
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<220>
<223> Description of Artificial Sequence: Ag3077 Probe
Primer

<400> 162
gactcatgcc aggaatgtgc ccc 23

<210> 163
<211> 20
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Ag3077
Reverse Primer

<400> 163
gaagagacct ttgacgtccc 20

<210> 164
 <211> 22
 <212> DNA
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 <220>
 <223> Description of Artificial Sequence: Ag2908 Forward
 Primer

 <400> 164
 attgtttaca tcaaacggca tt 22

 <210> 165
 <211> 26
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 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag2908 Probe
 Primer

 <400> 165
 aatccttttg aggcccttgt cccata 26

 <210> 166
 <211> 22
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 <220>
 <223> Description of Artificial Sequence: Ag2908 Reverse
 Primer

 <400> 166
 tcccagttga gactcctact ga 22

 <210> 167
 <211> 22
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 <220>
 <223> Description of Artificial Sequence: Ag1522 Forward
 Primer

 <400> 167
 tgacttcgac acagacatca ct 22

 <210> 168
 <211> 24
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<220>
 <223> Description of Artificial Sequence: Ag1522 Probe
 Primer

<400> 168
 actcatctgc tgccctgact ggtg 24

<210> 169
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Ag1522 Reverse
 Primer

<400> 169
 ccttgccgctc ttaaagttga c 21

<210> 170
 <211> 22
 <212> DNA
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<220>
 <223> Description of Artificial Sequence: Ag1848 Forward
 Primer

<400> 170
 tgacttcgac acagacatca ct 22

<210> 171
 <211> 24
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 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Ag1848 Probe
 Primer

<400> 171
 actcatctgc tgccctgact ggtg 24

<210> 172
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Ag1848 Reverse
 Primer

<400> 172

ccttgccgtc ttaaagttga c 21

<210> 173
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Ag2263 Forward
Primer

<400> 173
tgacttcgac acagacatca ct 22

<210> 174
<211> 24
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Ag2263 Probe
Primer

<400> 174
actcatctgc tgccctgact ggtg 24

<210> 175
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Ag2263 Reverse
Primer

<400> 175
ccttgccgtc ttaaagttga c 21

<210> 176
<211> 19
<212> DNA
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<220>
<223> Description of Artificial Sequence: Ag2422 Forward
Primer

<400> 176
ggctccctgg acactctct 19

<210> 177
<211> 26

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag2422 Probe
 Primer

 <400> 177
 ctgtcaccac ccagctggga ccttat 26

 <210> 178
 <211> 20
 <212> DNA
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 <220>
 <223> Description of Artificial Sequence: Ag2422 Reverse
 Primer

 <400> 178
 tggacagtgg gatcttgaag 20

 <210> 179
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag2421 Forward
 Primer

 <400> 179
 tgaggctgag ctctctgtgt 20

 <210> 180
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag2421 Probe
 Primer

 <400> 180
 tctgctaact gtgaaggatc tcacca 26

 <210> 181
 <211> 20
 <212> DNA
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 <220>
 <223> Description of Artificial Sequence: Ag2421 Reverse

Primer

<400> 181
ctggtccaca ttgtcaggaa 20

<210> 182
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Ag2873 Forward
Primer

<400> 182
ccctgctcac aagactgact ag 22

<210> 183
<211> 24
<212> DNA
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<220>
<223> Description of Artificial Sequence: Ag2873 Probe
Primer

<400> 183
ctccacgcag tttcaggcat gaag 24

<210> 184
<211> 22
<212> DNA
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<220>
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Primer

<400> 184
gacattagga gacaacctcc aa 22

<210> 185
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Ag2878 Forward
Primer

<400> 185
catctctaag aatgccctca ga 22

<210> 186
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag2878 Probe
 Primer

 <400> 186
 cttcgtctgc ttacacacct aagcct 26

 <210> 187
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag2878 Reverse
 Primer

 <400> 187
 gaggggtctcc agatggttat tg 22

 <210> 188
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag1799 Forward
 Primer

 <400> 188
 gaccaacggc tttcttcaag 20

 <210> 189
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag1799 Probe
 Primer

 <400> 189
 accttccttc ttgcgacttg gtcct 26

 <210> 190
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Ag1799 Reverse
 Primer

 <400> 190
 tcagttgttc aaagcacaca aa 22

 <210> 191
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag2911 Forward
 Primer

 <400> 191
 cagggatgga atgcattatg 20

 <210> 192
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag2911 Probe
 Primer

 <400> 192
 caatgtcacc tgtactcaga tctgtga 27

 <210> 193
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag2911 Reverse
 Primer

 <400> 193
 gctctccaaa gcagtaagga a 21

 <210> 194
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Ag1559 Forward
 Primer

<400> 194
caggacctcg gttatcaaca 20

<210> 195
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Ag1559 Probe
Primer

<400> 195
acctacgttg agcaaccgtg ccg 23

<210> 196
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Ag1559 Reverse
Primer

<400> 196
atcgtactcg ctggcgtaa 19

<210> 197
<211> 1062
<212> DNA
<213> Homo sapiens

<400> 197
ggatcctccc agttggagga ggtgtttcac tctgaaaaag agacgaagag ctcaagaata 60
aaggctgaag aaaaagaggt ggtaagaata aaggctgaag gaaaagagat tgagaacaca 120
gaagcagtac atcaacaatt ccaaaagtgt ttgactgaaa taagcaaact cactaatgat 180
tatgaactga acataaccaa caggctgttt ggagaaaaaa catacctctt ctttcaaaaa 240
tacttagatt atgttgaaaa atattatcat gcatctcttg aacctgttga ttttgtaaat 300
gcagccgatg aaagtcgaaa gaagattaat tcctgggttg aaagcaaaac aaatgaaaaa 360
atcaaggact tgttcccaga tggctctatt agtagctcta ccaagctggg gctggtgaac 420
atggtttatt ttaaagggca atgggacagg gagtttaaga aagaaaatac taaggaagag 480
aaattttgga tgaataagag cacaagtaaa tctgtacaga tgatgacaca gagccattcc 540
tttagcttca ctttcctgga ggacttgag gccaaaattc tagggattcc atataaaaac 600
aacgacctaa gcatgtttgt gcttctgccc aacgacatcg atggcctgga gaagataata 660
gataaaataa gtcctgagaa attggtagag tggactagtc cagggcatat ggaagaaaga 720
aagggtgaatc tgcacttgcc ccggtttgag gtggaggaca gttacgatct agaggcggtc 780
ctggctgcca tggggatggg cgatgccttc agtgagcaca aagccgacta ctcgggaatg 840
tcgtcaggct ccgggttgta cgcccagaag ttctgcaca gttcctttgt ggcagtaact 900
gaggaaggca ccgaggctgc agctgccact ggcataggct ttactgtcac atccgcccc 960
ggtcatgaaa atgttctactg caatcatccc ttctgttct tcatcaggca caatgaatcc 1020
aacagcatcc tcttcttcgg cagattttct tctctctcag ag 1062

<210> 198

<400> 198

Ser Ser Arg Ile Lys Ala Glu Glu Lys Glu Val Val Arg Ile Lys Ala
20 25 30

Glu Gly Lys Glu Ile Glu Asn Thr Glu Ala Val His Gln Gln Phe Gln
35 40 45

Lys Phe Leu Thr Glu Ile Ser Lys Leu Thr Asn Asp Tyr Glu Leu Asn
50 55 60

Ile Thr Asn Arg Leu Phe Gly Glu Lys Thr Tyr Leu Phe Leu Gln Lys
65 70 75 80

Tyr Leu Asp Tyr Val Glu Lys Tyr Tyr His Ala Ser Leu Glu Pro Val
85 90 95

Asp Phe Val Asn Ala Ala Asp Glu Ser Arg Lys Lys Ile Asn Ser Trp
100 105 110

Val	Glu	Ser	Lys	Thr	Asn	Glu	Lys	Ile	Lys	Asp	Leu	Phe	Pro	Asp	Gly
		115					120					125			

Ser Ile Ser Ser Ser Thr Lys Leu Val Leu Val Asn Met Val Tyr Phe
130 135 140

Lys Gly Gln Trp Asp Arg Glu Phe Lys Lys Glu Asn Thr Lys Glu Glu
145 150 155 160

Lys Phe Trp Met Asn Lys Ser Thr Ser Lys Ser Val Gln Met Met Thr
165 170 175

Gln Ser His Ser Phe Ser Phe Thr Phe Leu Glu Asp Leu Gln Ala Lys
180 185 190

Ile Leu Gly Ile Pro Tyr Lys Asn Asn Asp Leu Ser Met Phe Val Leu
195 200 205

Leu Pro Asn Asp Ile Asp Gly Leu Glu Lys Ile Ile Asp Lys Ile Ser
210 215 220

Pro Glu Lys Leu Val Glu Trp Thr Ser Pro Gly His Met Glu Glu Arg
225 230 235 240

Lys Val Asn Leu His Leu Pro Arg Phe Glu Val Glu Asp Ser Tyr Asp
245 250 255

Leu Glu Ala Val Leu Ala Ala Met Gly Met Gly Asp Ala Phe Ser Glu
260 265 270

297

275		280		285
Gln Lys Phe Leu His Ser Ser Phe Val Ala Val Thr Glu Glu Gly Thr				
290		295		300
Glu Ala Ala Ala Ala Thr Gly Ile Gly Phe Thr Val Thr Ser Ala Pro				
305		310		315
Gly His Glu Asn Val His Cys Asn His Pro Phe Leu Phe Phe Ile Arg				
	325		330	335
His Asn Glu Ser Asn Ser Ile Leu Phe Phe Gly Arg Phe Ser Ser Pro				
	340		345	350
Leu Glu				

<210> 199
 <211> 33
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2e Primer
 F1

<400> 199
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<210> 200
 <211> 38
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2e Primer
 R1

<400> 200
 ctcgagagga gaagaaaatc tgccgaagaa gaggatgc 38

<210> 201
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2e Primer
 SF1

<400> 201
 atgaactgaa cataaccaac aggct 25

<210> 202
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV2e Primer
 SF2

 <400> 202
 ggacttggtc ccagatggct cta 23

 <210> 203
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV2e Primer
 SF3

 <400> 203
 tttagcttca ctttcctgga ggact 25

 <210> 204
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV2e Primer
 SF4

 <400> 204
 aaagaaaggt gaatctgcac ttgccc 26

 <210> 205
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV2e Primer
 SF5

 <400> 205
 ttgtggcagt aactgaggaa ggc 23

 <210> 206
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2e Primer
 SR1

<400> 206
 agcctgttgg ttatgttcag ttcac 25

<210> 207
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2e Primer
 SR2

<400> 207
 tttttcattt gttttgcttt caacc 25

<210> 208
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV1b Primer
 SF5

<400> 208
 gggatcctcc agatcctgta ttttt 25

<210> 209
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2e Primer
 SR3

<400> 209
 aggaatggct ctgtgtcatc atctg 25

<210> 210
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2e Primer
 SR4

<400> 210

ctttctttcca tatgccctgg acta 24

<210> 211
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV2e Primer
 SR5

<400> 211
 caaaggaact gtgcaggaac ttct 24

<210> 212
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV1b Primer
 SR3

<400> 212
 gtgaatgcaa acttgaggtc ttttgt 26

<210> 213
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV1b Primer
 SR4

<400> 213
 cctcatataa tcctaccatt ggctgtact 29

<210> 214
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: NOV1b Primer
 SR5

<400> 214
 gaggatccca gtgtaaaaat acttctg 27

<210> 215
 <211> 27

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV1b Primer
 SR6

 <400> 215
 tagcattca taagcaataa tgatccc 27

 <210> 216
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV1b Primer
 SR7

 <400> 216
 tgagtgtact agcagacacc tcaatgat 28

 <210> 217
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV11c Primer
 SF1

 <400> 217
 gccctgccgg tccaggtc 18

 <210> 218
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV11c Primer
 SF2

 <400> 218
 ggcgacggca ccagcatgt 19

 <210> 219
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV11c Primer

SR1

<400> 219
gcctggcctg ccgggttct 19

<210> 220
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV11c Primer
SR2

<400> 220
catgagcacg tggtaagcg 19

<210> 221
<211> 24
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<220>
<223> Description of Artificial Sequence: NOV1b Primer
SF1

<400> 221
gtgctggcat tggagtgttt agtg 24

<210> 222
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV1b Primer
SF2

<400> 222
atcaagcacg ttgacacaga atgag 25

<210> 223
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NOV1b Primer
SF3

<400> 223
gcattcacta acctaacc atttaca 27

<210> 224
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV1b Primer
 SF4

 <400> 224
 gttcagcaga gatgtcgtct gaccttc 27

 <210> 225
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV1b Primer
 SF6

 <400> 225
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 <210> 226
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 <220>
 <223> Description of Artificial Sequence: NOV1b Primer
 SR1

 <400> 226
 actgttttca gcagctacct taatttc 27

 <210> 227
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: NOV1b Primer
 SR2

 <400> 227
 cttgatgaat gtgtggtacg cgat 24